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ABSTRACT

This report describes what Japanese organizations have been and are doing to develop their human resources to achieve a high degree of individual and organizational effectiveness and productivity. The first part presents case studies of 16 organizations--both private industry and government--based on interviews conducted in September 1981 in Japan. Part II is a management discussion drawn from the individual company and organization findings. The first of four sections in part II focuses on how the successful development of Japanese employees is stimulated and nourished by continuous learning that is integrated with management's work processes, organizational structure, and the work environment. The next section discusses the personnel systems that aid the good management of human resources by complementing and reinforcing the development of employees, coordinating training, and integrating educational programs. A third section addresses the integration of training and education programs with self-development and continuous learning and through the work. The fourth section concerns how Japanese culture supports continuous learning. A summary reviews principles of management that contribute to productivity, team management, and the organization's capacity for changing technologies. Continuous learning is advocated as the key to successful practices in the management and development of people. (YLB)

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The Japanese ideograph on the front cover means "education."

THE CONTINUOUS LEARNING CENTER

The Continuous Learning Systems group was organized in San Francisco in late 1981 by Far West Laboratory for Educational Research and Development as a new program to provide R&D to the private sector. Its goal is to help create a learning society.

CLS studies the basic learning processes that deeply affect quality and productivity in home learning on computer, adult education, colleges for adults, learning in work environments, and in restricted environments. As a non-profit organization, the results of CLS research projects are generally made public wherever such dissemination is of value as in the case of this report.

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For brochures and more information write to Gerald J. Skibbins, Director, Continuous Learning Center, Far West Laboratory, 1855 Folsom Street, San Francisco, CA., 94103, or telephone (415) 555-3069.

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continuous
learning
within

Japanese
organizations

Written by
Avice Saint
March 17, 1982

TO YUZO AND KARIN MIKAMI

Without the initial inspiration and continuing interest of my dear friends, Yuzo and Karin Mikami of Tokyo, this work would not have come into being.

Avice Saint

A PUBLICATION OF THE CONTINUOUS LEARNING CENTER, FAR WEST LABORATORY, SAN FRANCISCO

BIOGRAPHICAL NOTES

Avice Saint, Ed.D., Consultant in Organizational Learning and Development, devoted thirty years to the management and development of personnel for the Department of Defense both in the United States and in Europe.

She has instructed at the University of Maryland, California State University at Hayward, and Golden Gate University in San Francisco. Recently, Dr. Saint was Associate Dean, School of Management at John F. Kennedy University and Hewlett Professor of Public Administration.

Dr. Saint received her doctorate at the University of California at Berkeley in 1969 in the field of learning within organizations. She is the author of Learning at Work: Human Resources and Organization Development (originally published in 1974, paperback edition in 1978, Nelson-Hall, Chicago) based on survey research of influences affecting learning within business and government organizations.

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FOREWORD

This report is based on a unique series of interviews the author conducted in September, 1981, in Japan. The interviews would not have been possible were it not for the interest, support, and follow-through of American and Japanese executives in this country who prepared and established connections with Japanese leaders. I especially wish to express my appreciation to Dr. Edmund Learned, Emeritus Charles Wilson Professor of Harvard University, and Dr. Joseph McPherson, Program Manager, Innovation Management Programs, Stanford Research International. In Japan, I am especially grateful for the insights afforded me by Shin-ichi Takezawa, Dean and Professor, School of Social Relations, Rikkyo University, Tokyo, Japan and Dr. Noritake Kobayashi, Director and Professor, the Business School of Keio University, Yokohama, Japan. A complete list of acknowledgements of those who participated in this study is included as Appendix A of this report.

The quality and depth of the interviews in Japan, the wealth of information they provided, and the abundance of ideas they produced make me deeply grateful to the interviewees. I met sincerity, hospitality, support, and generosity from the many business, academic, and government leaders in Japan who freely took part in the investigation.

The Continuous Learning Systems group at Far West Laboratory in San Francisco commissioned the study. I am indebted to its director, Gerald J. Skibbins, for encouraging me to develop this study's implications for top-management strategy, governmental policy, and educational research. I am deeply grateful for the stimulus of his vision that U.S. organizations must meet the continuous learning imperatives of our times if the U.S. economy and its productivity rates are to improve.

Avice Saint
Oakland, California
June, 1982

INTRODUCTION

Continuous Learning Within Japanese Organizations

The purpose of this report is to describe what Japanese organizations have been and are doing to develop their human resources to achieve a high degree of individual and organizational effectiveness and productivity. It is hoped that it will be helpful to organizations in the United States which seek to improve their effectiveness and productivity.

It is based on research performed in Japan during the month of September, 1981, when sixteen organizations, both private industry and government, were visited. A list of company and academic leaders and consultants who participated is found in Appendix A of this report.

The original plan to look at the training and education practices of Japanese management was changed by the evidence. From answers to the question "How do you develop your people?" emerged descriptions of many interlocking processes and systems in management operations and personnel procedures that were directly related to one another. As the research progressed, it was discovered that training and education programs themselves were amplifications of continuous learning going on at all times, in all operations, at all levels, and for all members of the work force. It was then decided that the most important concept explaining how the Japanese develop their people was this concept of continuous learning, what is in fact a moving, generating element, the locus for many productive activities. As though woven in a tapestry, learning is integrated in all the processes of these organizations. It is as though management had asked, as it set up various administrative and production processes and systems,

"How can we make this process or operation one in which people can learn and develop and thus produce better?"

How does Japanese management develop people? Before getting into the major discussion of this paper, here are some thoughts that set the stage:

- There is a high and very real concern for people throughout management. It is not so much the way managers treat people, but the way in which they respect each human being and do their best to use his capabilities in a way that is best for the firm and also best for the individual. This respect is also shown in the fact that development is not forced on the individual, but everything is done to set up the environment, the challenges, and the assistances that evoke growth and development. Furthermore, in the understanding of the individual lies the genesis of collaboration. Collaboration is not the result of order or directives from above but springs from the understanding generated within individuals about how the firm works. Japanese employers and managers gain this through their experiences in different kinds of work and from working with one another in teams or as peer counselors. They learn to think together.

- The emphasis is on day-to-day continuous learning through, from, and in work and from the others who are involved in the work. Thus, learning is regularly integrated into management processes, personnel systems, and is amplified by more formal courses and seminars. This long-range process is harmonious with the fact that Japanese management emphasizes long-term objectives.

- Japanese management is team management. The self has meaning as a part of a group in school, family, religion, and this is carried over into organizational life. Workers and managers do things together as a team, not as combatants.

- The organization has developed an environment which is conducive to learning. There is a readiness of "learning managers and learning employees" to absorb and use ideas that come from training courses. What has been learned in a classroom is readily adapted to the office or factory. Instead of resistance, there is receptivity; and instead of failing to use ideas, they are incorporated into the bloodstream of the organization.

- Work is central to the development of people. Work is used not only to turn out products, but also to develop people. It is designed to spark learning. Unless work produces both value and learning, it is worthless.

- Top management act in ways that show that they mean their statements that "people determine the fate of an organization."

- Traditionally, students of U.S. organizations bemoan the dilemma that the needs of the organization conflict with those of the worker, concluding gloomily that both cannot be satisfied. The continuous learning concept within Japanese organizations somehow gets very close to the successful integration of both organizational and worker needs and wants. They are both working for the success of the enterprise which brings satisfaction and rewards to both. In a word, they have unified their goals.

- Motivation, which seems so lacking in much of the work in America, can, in its Japanese workplace, teach us much. Japanese managers understand that they are not trying to motivate people, but rather are establishing the environment and the challenges which help people to motivate themselves. They link motivation and continuous learning, showing that motivation with learning can provide a sense of direction and the fulfillment of aspirations. Motivation without learning would be going in circles. One needs continually to learn where he is, where he is going, what he can do. Learning at work is motivating because it brings confidence, substance, and value to doing work. Learning without motivation is dead. Learning needs purpose and interest to bring it alive. Participation in management processes adds to this interest; and learning brings commitment to the work at hand. Learning is related to day-to-day realities.

- Although the authority of position remains obvious in all Japanese management behavior, there is a democratic feeling between managers and workers, and there are no great gaps between ranks and levels. For example, managers and workers are much closer in salaries than in the United States. The physical location of managers, supervisors, and foremen is close to or among the people they supervise; they are not segregated. Each organization develops various arrangements in which people cooperate as equals.

The plan of this report is to present continuous learning as the locus for the development of Japanese managers and workers. It will be discussed as a generating element that the Japanese have built into the fabric of everyday work, of management processes, supported by personnel systems, amplified by training and education programs, and supported by culture and custom. Principles found underlying each of these aspects or factors that contribute to continuous learning will be discussed. These principles

come from comparative analyses of the data received from each of the companies and organizations visited. In discussing the conditions that enable Japanese business organizations to maintain their international competitive advantage today, Shin-ichi Takezawa states: "We have stressed that the real competitive advantage today lies not in capital, technology, or market know-how, but rather in the unique ways in which workers and managers in a given social context organize themselves for work."[1]

The discussion that follows seeks to bring out the principles which undergird the story of how Japanese management has developed its people. Instead of recommending that U.S. companies attempt to swallow Japanese systems whole, this approach lends itself to analyzing the basics of our own management processes, of our personnel systems, of our American culture, and of our training and education programs to determine if the underlying principles are at work or not. It is important that we not only adopt the basic concept of continuous learning, but that we also discover exactly how it might be made useful and productive in our own particular organizational problems and operations.

On the next page, a model sets forth the four primary areas of managerial concern which mark Japanese industry as far as productivity is concerned. Note that Continuous Learning is at the core of all activities.

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[1]Takezawa and Whitehill, Workways: Japan and America. (Tokyo: Japan Institute of Labor, 1981), p. 14.

MANAGERIAL CONCERNS MODEL

Management Processes, Personnel Systems, and Education and Training Programs Make the Development of Personnel the Continuous Learning System It Is.

MANAGEMENT PROCESSES, ORGANIZATION, ENVIRONMENT

- Management Philosophies, Policies
- Planning and Control
- Organizational Structures
- Decision Making
- Group Processes
- Production Systems
- Work Design
- Physical Arrangements
- Ways Managers Manage
- Labor Management Relations

PERSONNEL SYSTEMS

- Security, Long-Term Employment
- Development of Generalists
- Recruitment
- Placement, Promotion, Career Paths
- Ranking and Seniority
- Job Categories
- Separation
- Fringe Benefits

CONTINUOUS LEARNING

CULTURE

- Self as Part of Group
- Quest for Knowledge
- Diligence, Patience, Self-Control
- Saving Face
- University - Liberal Arts
- The Way is in Training

EDUCATION AND TRAINING PROGRAMS

- Organizationally a High-Status Activity
- Determination of Needs
- Program Planning
- Kinds of Programs:
  - Orientation
  - Self-Development
  - Senpai-Kohai
  - On-The-Job Training
  - Off-The-Job Training
  - International Training
  - Vocational/Training Apprenticeship

I. THE CASE STUDIES

Before presenting a management discussion drawn from the individual company and organization findings, this report presents the individual case studies themselves.

The contrasts between these organizations, and many others in the United States and elsewhere, are often so remarkable that the reader will be able to judge later analyses and conclusions more effectively if he first examines the organizations one at a time.

LEARNING AT AJINOMOTO COMPANY:

A Continuous Training and Education System

Ajinomoto Company is a diversified manufacturer and distributor of food products, amino acids, and specialty chemicals. With its headquarters in Tokyo, Japan, it serves a domestic network through eight major sales offices throughout Japan and sells its products worldwide as well as manufacturing them in Southeast Asia, Europe, and Latin America. Its net sales, net income, and shareholder's equity have increased steadily since 1977. Its growth is marked by diversification into related fields and joint ventures with French and American companies.

Management Philosophy

Ajinomoto believes that both the value of a company to society and the company's own growth depend on the contribution it makes to human health and well-being through the fulfillment of its responsibilities as a leading producer of processed foods and related products.

The total number of employees is approximately 11,000 (6,000 in Japan and 5,000 overseas). Exemplifying its concern for people, Ajinomoto believes that productivity comes from the way managers manage, the feeling of partnership of management and employees, and the integration of its personnel development system into all aspects of its management and operations. Ajinomoto looks at labor first as human beings. Labor unions are built up as a source of partnership. They try to have labor officials truly representative of the workers, and they make every effort to keep in close communication with their union, avoiding hostility. Once a month a conference of management and labor is held. Sixteen union representatives participate with approximately the same number of management representatives.

As much information as possible is given by management to the labor representatives. Proposals are entertained and fully discussed until agreement is reached by management and labor. They work for complete understanding of the proposals at hand. Always, they try to get everyone involved to see the future outlook and the direction of the company.

An annual negotiation of wages is made in March, and normally an agreed-upon increase would come in April. Also, there are two negotiations for the bonus in June and December. Bonuses are given in June and December as a supplement to wages, unless the financial condition of the company does not permit them to be paid. In that case, employees are continued on their regular salaries, and when the financial condition of the company improves, the bonus is restored. This makes for security of employment and the worth of the investment in training, for there is very little turnover of personnel.

Managerial Development

Young managerial trainees enter the company at about the age of 20-22. Advancement and promotion, according to their seniority system, provides for one year as a junior manager or section chief and three to four years as assistant manager. Full manager is the highest rank, and the average age of those holding this rank is 35-40. Some of the full managers are given the opportunity to become a member of the Board of Directors. This Board is selected from their internal staff of managers, and only one or two are selected from the outside.

An example of a current executive vice-president illustrates this system. As a manager trainee, he was first assigned to the factory, then to study for a master's degree. Returning to the factory, he worked in

accounting, sales, and marketing. He then became a section chief at the Osaka sales office and next went to the Harvard Graduate School of Business. Later he was assigned as chief of an Ajinomoto joint venture with Kellogg cereals in the United States, where he gathered capable people to help that venture become the success it is.

Managers are developed through their work as well as training programs both inside the company and through being sent abroad to schools of business administration. Japanese management is team management. Although jobs are tied to sections, flexibility is allowed for the manager in assignment of work to his employees. Therefore, managers can assist employees in their growth and development without confronting the personnel department. Most of the manager's work depends upon his ability to get teamwork. If he cannot work well with others, he is not able to be a manager.

The firm works to bring about a sense of productivity in their managers, to see that they manage people efficiently and help their subordinates remain happy in their work.

Their program for setting objectives is largely a matter of negotiation. Every six months they work on setting objectives: what has to be achieved and the rate of achievement. Top management sets objectives which are broken down by departments. If the manager finds them too difficult to achieve, then objectives are negotiated. Each department manager is asked to make a proposal and come to a concluding agreement. Then each department manager works with each section manager, and each section manager works with each employee. If they cannot achieve their goals, explanations as to problems and obstacles are made.

Personnel Department and System

Personnel representatives visit factories, branches, and listen to employees and labor representatives. They work to achieve this goal: that all employees at all levels are happy human beings. The company is like a big family, and working in it is like living in a family. The workers are dedicated to their company, as they are working for the company and for themselves. They feel happy and secure. The retirement age is 60. They receive a company pension, and the pensions are adjusted to inflation. Everybody feels a part of the company. This is what makes the training and development worthwhile. It is more than just education and training. The lowest junior and the top manager talk the same language. Managers are much closer to workers, and their pay is much closer to workers' pay than in the United States. There is no system of layoff, for as long as the company continues, the employees continue working.

THE CANON CONTINUOUS LEARNING SYSTEM

Canon has been a designer, developer, manufacturer, and marketer of high technology and high quality in cameras, business equipment, and optical products since the firm's founding in 1937. Its sales, which tripled in the last five years, show one result of the management philosophy which is to make Canon a top-ranked company in all respects -- not only financially, but also in products, sales, service, and management. Their goal is to harness technology to make products responsible to human needs. Their policy is to act responsibly in carrying out commitments to their principal constituencies: customers, shareholders, employees, and the general public.

Management's Policy With Regard to its People

In 1935, when Canon was a twenty-five worker camera factory in Tokyo, each employee was treated as an individual. Each was valuable; each knew that his work contributed to a top-quality product. In the years since growing into an international company, the feeling has not changed. To over 20,000 employees in over 30 countries, Canon is a company that cares enough to produce the best. It is a good place to work, and there has never been a strike of their union since it was formed in 1946. Canon involves their employees in every step of the way, whether it be the indoctrination to the company, the initial or continuous training, the assistance to self-development, or the management processes which bring about learning such as rotation, on-the-job training, decision making, and small-group meetings.

Canon's first major policy is the "three-self" policy: self-development, self-awareness, and self-government. These are the principles of

Canon personnel administration. Essentially, this means that one should work responsibly and be aware of the group's goals. Canon believes that these principles help realize the ambitious worker's creative ideas.

Canon is in an excellent position to provide manufacturing, sales, and service around the world with 13 plants and 19 offices.[1] The company markets its products in more than 130 countries, and its employees number more than 20,000 (December, 1980).

Organization

Canon's internal organization is a "cross-hatched matrix" structure with the three product groups as horizontal profit centers: cameras, business equipment, optical products, and with the vertical links of research and development, manufacturing, and marketing. Canon's organization provides the sources of maximum results. Important tools are CAD (computer-aided design) and CAM (computer-aided manufacturing). Recently, the addition of graphic display screens, like electronic drawing boards, has made real conversation possible between the engineers and the computer. CAM has been an important tool for some years in the form of punched paper tapes which control production machinery. Now they link CAD and CAM directly. Once a design is completed on the computer, an engineer can have the computer directly generate the paper tape for manufacturing, eliminating handling between the two stages, thus reducing the chance of human error and freeing engineers' time to work on other projects.

The Personnel Department includes the training function, except for the Training Center which is now independent of Personnel.

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[1]Plants: five in photo products, four in business machines, one in optical products, and three in other products. Offices: six in Japan, seven in the United States, four in Canada, and two in Latin America.

Personnel Management System

The Personnel Management System sets a favorable environment for growth and learning, provides hierarchical levels which are the foundation for programs of compulsory training, and makes training a worthwhile investment for the company because of continuing employment, little turnover, and high return in increased productivity, quality, and morale.

Lifetime employment. Except in unusual situations, employees work until retirement age (ordinarily 55-60). Employees are honored with periodic commendations approximately every five years with a special commendation after twenty years.

Ranking by seniority. This provides for raising salary and status in accordance with length of service. However, at Canon, in addition to these two factors, those who show greater ability and achievement are promoted to higher positions. Canon is aware of the fact that the growing percentage of senior persons in the Japanese population makes it difficult to maintain seniority ranking and merit promotion. Under Canon, employees are also rewarded for their ability instead of being promoted only by seniority and by personality.

Recruitment and employment. Canon hires the "man" rather than filling a specific job. They feel this has advantages. The employee is thinking more of the company than a specific job, saying: "I work for Canon." Also, the manager can be more flexible in assigning challenging jobs and stimulating learning on the part of the employee, since specific job responsibilities are not spelled out on job sheets, thus, the employee does not feel boxed in and also does not push to have his job upgraded.

Canon hires its regular employees in April of every year immediately after students have graduated from school -- junior high, senior high,

junior college, or Kosen (a five-year school following junior high school), college, or university postgraduate. Employees are selected on the basis of general aptitude rather than on specific training or background. The company then accepts responsibility for training these workers on the job.

The procedures for planning the number of "freshmen" to be hired and the steps involved require a year before the "freshmen" are on the job:

May:	Offices file requests for the number of new employees needed.
June:	Management conference decides how many at each educational level shall be hired.
July:	Recruiting begins at senior high schools, which have been good sources of employees in the past.
September:	The company accepts employment applications from students graduating the next Spring.
October:	Entrance tests, written examinations, interviews, and health examinations for senior high school graduates. Introduction and explanation meeting is held for college/ university graduates.
November:	Entrance test for college/university graduates.
February:	Number at each academic level decided for each department; ceremony held for receiving the freshmen, company orientation, assignment for graduates of senior high schools, interviews before determination of assignments.
End of May:	Factory work experience and sales training are given to male graduates of colleges and universities.
June:	Assignment of male graduates of college/ university.

"Irregular" employment (hiring at any time as opposed to the "regular" employment described above) shows an increasing trend and is believed to signify changes in the younger generation's thinking. (In 1979 Canon had

960 irregular employees). Since in Canon the merit promotion and the wage systems have been consolidated, and treatment of irregular employees is according to ability and experience, there is practically no distinction between regular and irregular employees.

Job classification. Aware that Japanese companies had tried and found unsuccessful the job analysis and classification system as practiced in the United States, Canon uses a category system. There are approximately 200 categories such as personnel, accounting, planning, organization education, welfare, audit, production, legal, etc. Within each of these categories, there are 15 ranks, each of which is assigned a basic wage plus a bonus equivalent to three months' wages given twice a year. In addition, there are allowances for management, family, housing, and special operations. Illustrating the mix of seniority and merit promotion, the first six ranks are promoted by ranking standards as the required time is completed; the next three ranks require tests for promotion, and the last or highest six ranks require performance assessment for promotion. As mentioned previously, Canon sees advantages in the category/rank system without specific individual job descriptions: a person is hired for the company and not for a specific job; managers can assign different jobs more flexibly; individual workers cannot push to have a specific job upgraded; also individual workers can see the knowledge and abilities required by the various ranks, and this is motivating to the workers.

Health and humanity. Canon sets much value on human consideration of their employees and works for a harmonious atmosphere of mutual trust and understanding. Canon is concerned with employee health and provides opportunities for employees to check their health. Its new family policy says that Canon is a company for all of the employees, and the company's

prosperity guarantees employees' healthy and wealthy lives. The Canon Health Insurance Union receives monthly payments from individual workers and contributions from the company. Commendations and appropriate gifts are given for those who have perfect attendance for a certain number of years. There is a pension system in which the National Welfare Annuity and the company's retirement payment are incorporated as a pension after the payment of a lump sum upon retirement. Retirement can be received either in full at the time of retirement, or half in cash and the other half in a monthly pension, or the full amount in monthly pension.

Labor unions and labor relations. The Canon Labor Union, since its establishment in 1946, has maintained relations without any strikes or disputes. Management and labor rely on thorough talks for solving problems. The resulting harmony increases the worth of training. There is a central council organized by labor and management and some smaller councils. There are six full-time central union officers. The eight Canon branches each have one full-time and six part-time labor officers.

Regularly scheduled labor management conferences are held between headquarter officers and company management as follows:

CONFERENCE	FREQUENCY	AGENDA
Central Labor Management Conference	Monthly	Working conditions, Business summary, Relevant issues
Labor Management	Scheduled as necessary	Business summary, Information exchange, General discussion
Central Safety and Hygiene Committee	Scheduled by committee	Safety and Hygiene policy, Accident prevention, Employee health

CONFERENCE	FREQUENCY	AGENDA
Housing Committee	Scheduled by committee	Company housing, Obtaining own residence, Dormitories
Wage Action Committee	Scheduled by committee	Wage allocations
Welfare Action Committee	Scheduled by committee	General welfare of employees, Benefits, Insurance,

The current themes in the labor management conferences are: partial amendment of the wage system, three years stabilized provision for bonus amount, plant relocation, new plant establishment, and standardization of working conditions for shift workers.

Canon describes their basic attitudes in labor-management relations:

- The company's and worker's well-being depends on good cooperation between the parties.
- The role of administrators in establishing this harmony cannot be underestimated. In this connection, the personnel division conveys labor policy and information as early as possible in order to gain the administrators' cooperation.
- The Canon management emphasizes personal contact with employees and the union's staff to settle problems in good faith.
- The Canon management scrupulously supplies correct information to employees on the business situation to maintain reliable relations between the parties.
- Labor and management mutually agree to respect human rights while at the same time preserving discipline.

In concluding this discussion of the personnel management systems at Canon, it can be seen how these organizational factors do much to stimulate learning: the feeling of management that a stable, well-motivated, and self-developing work force is well worth its investment in training; high employee morale, which is rooted in the security of their employment and

the clarity of career paths, as well as the openness of business information provided through unions, and the flexibility of job change through the category/rank system.

Training and Education System

Basically, Canon provides introductory training during the induction period and continuous training thereafter. There are three major categories of training: that specific to each rank or hierarchical level; that required in the specific field in which the employee works; and self-development study motivated by the worker himself. But, training is broader than specific courses and includes management processes which bring about the learning and the growth of the work force such as rotation, small meetings, and job training.

Training for each hierarchical level.

- For all new employees there is a complete orientation.
- The new college graduate is assigned to the field and to a factory to work with the workers. Also, he attends sessions during which lectures are given by officials of the firm and technicians come in as instructors. A wide variety of subjects is covered, since the goal is generalized knowledge of how the firm operates.
- New employee training.
- Lower foremen and supervisors are given a supervisory course with emphasis on how to manage subordinates, especially how to coach and develop their workers.
- The management level person is given a management training program.
- For the highest level of general managers or directors, the company provides simulated problems and business games. Also, professional training seminars at the Tokyo headquarters are available for experienced managers from all geographic areas.
- Those employees slated for overseas service must take an extensive international training course before being assigned.

Training for special fields.

Training for special fields is largely decentralized to the divisions which have the appropriate resources for providing the training:

- Canon Production System clarifies responsibility for quality assurance, productivity improvement and processes.

- Research and Development conducts courses in the Canon Development System, standardizing Canon processes.

- Sales conducts international training for those being oriented to work in different foreign countries. Also managers from countries in which Canon has offices and factories are brought to Tokyo for training and gaining deeper insights into Canon products and processes.

- The government supports mechanical skills training programs, and Canon, in addition, provides technical training for skills unique to its products.

Self-development.

There is a strong emphasis on helping each individual to learn. Opportunities are provided to learn to speak English and to study international relations, management, and many other subjects.

- Rotation. As previously discussed under the personnel recruitment and assignment system, rotation provides a wide variety of learning experiences for the new recruit during his first ten years.

- Management processes. There are opportunities for employees to learn and to contribute creatively to solving problems through small-group meetings on Zero Defects, Quality Control, Incentives, and Performance Assessment Control. Canon recognizes individual ideas and suggestions; their solicitation of employees' ideas show a healthy respect for the individual's ability.

- On-the-job training. Managers are given responsibility to train and develop their employees. Actually, the physical arrangements of Canon's offices assist this program. The concept of the "open office" is a large room accommodating 100-125 workers and desks. In the midst of the workers are Kacho (supervisor) and Bucho (manager). Thus, management is easily accessible at all times for questions and assistance. There is no need for an employee to go to an office separated from his/her work place. This closeness also encourages a feeling of working together. The equality of all working in Canon is a strong point of their concern for human resources. Also, there is planning for retraining for any worker whose job is to be eliminated.

TRAINING AND EDUCATION AT DAI-ICHI KANGYO BANK:

A Continuous Learning System

Dai-Ichi Kangyo Bank celebrated the tenth anniversary of its merger with the Nippon Kangyo Bank in 1971; Dai-Ichi Bank was founded in November 1872. With its headquarters in Tokyo, it has the largest network in Japan with branches in Osaka, Kobe, Nagoya, Yokohama, and 331 offices in 12 cities in Japan. Overseas it has representatives in the U.S., England, Germany, Taiwan, Korea, Canada, Brazil, Mexico, Venezuela, Argentina, France, Spain, Holland, Switzerland, Hong Kong, Indonesia, Malaysia, Australia, and Panama. It provides a full range of banking services, commercial transactions, capital, technical and business tie-ups with others, payroll computerized services, leasing, factoring, venture capital, legal, tax, and management consulting, and a bill-collection system.

Dai-Ichi Kangyo's management describes itself as the "bank with a heart." Its philosophy is to give the best possible service and thus to improve the quality of national and work life. Because of its service goal, it has set up new deposit methods, new pension plans, property accumulation plans, new forms of personal loans, new "at-your-service counters," time-saving teller services, cash dispenser machines, automated depositors, and automated teller machines.

Organization

The responsibilities for training and development, as well as the use of human resources, are divided between the Personnel Department and line managers. Each branch has a manager, director, and assistant, and each of these 330 branches has a training program appropriate for its

functions. Each department manager is responsible for training and education and for training and communications development from the head office. These managers participate in sessions which help them to meet their responsibility to train their employees.

The training staff is made up of eight men and six women. Their training program is based on a twice-yearly survey of the organization, keeping pace with its diversification and internationalization of corporate activities, and developing comprehensive services for business clients whether they are big businesses or medium-to-small enterprises. Training surveys to form future programs are conducted among members of the training staff, managers, and with the director of personnel. The Board of Directors may indicate the directions it feels the training programs should take. Both short- and long-term plans are prepared for the director of personnel and are processed through the vice-president in charge of personnel to the Board of Directors.

Personnel Systems

Investment in training is considered worthwhile because the Company provides for both lifetime employment and job security for those not on lifetime employment. Dai-Ichi Kangyo personnel systems seek to provide security, assurance of promotion, and opportunities for career development. Promotion by seniority is not rapid, but it is certain. Other rewards are: opportunities to learn through job rotation, bonuses in June and December, and advancement.

Training and Education

There are four major parts of Dai-Ichi Kangyo's training and education:

Self-development. Heavy emphasis is placed on each employee's responsibility for his or her own self-development. Each employee receives a self-development manual which is explained in orientation sessions. Eighty courses are available for voluntary participation. Of these , 44 are in management, tax, and law. Correspondence courses are also available; one of which is computer training and is widely used by many employees.

Early in their career with Dai-Ichi Kangyo Bank, all employees learn that their growth and advancement depends upon their plan for developing themselves.

Internal training: On-the-job. This is the backbone of the training/learning process. In management development programs, training is given to managers and supervisors in how to train and develop their employees. As part of his job, each branch manager is responsible for helping employees to learn both through work and by courses off-the-job. They must also insure that each employee has a "Planning for Performance Self-Development Record." This record is reviewed by both the employee and the manager. It includes a specific plan for the training and development of an employee, his personal targets, performance records, and branch manager comments. When employees complete training/learning experiences, supervisors discuss with them the impact of the learning experience and check with them every three months on their plans for performance and development.

Internal training: Off-the-job. For newcomers, during their early years with the firm, training courses are provided in basic banking background knowledge that applies to deposits, loans, and other banking functions.

The development of managers is a long-term program. Managers are provided management development training courses three times during their careers at the ages of 32, 37, and 42 (see the following table).

AGE	GRADE	TIME TO REACH	POSITION, RANK
42	13 13	20 years	General Manager, Head Office or Division
37	11 10 9 8 7	16-18 years	Manager of Branch
32*	6 5 4 3 2	10-12 years	Assistant Manager of Branch
22	1		

*Start of management training.

Young managers are selected for training programs by their managers and the training staff. Before attending, they prepare themselves for their courses. If they are found to be unprepared, they are sent back to their offices until a later date. A four-day, live-in course is provided for all managers. This includes personnel management, instruction and training methods, bank policies, business development, and new changes in banking. Ability in English is tested for those going to overseas assignments.

One aspect of managerial development is the rotation of managers to a variety of jobs, including overseas assignments. For example, an assistant manager could be assigned to work with Merrill Lynch in New York for eight months, and then to a London securities and investment firm for four months. The branch manager and training staff select those who are to participate in such overseas assignments. The selections are based on individual evaluations, personal histories, record of positions held, performance, and self-development records. Managerial development is correlated with the grades, positions, and ranks as shown in the preceding table.

Teller training. Two-thirds of the tellers are women. The teller course is a four-day course given twice a year, and a manual is provided for each participant. A leaders' course is given to those who teach the "freshmen tellers." Through this course, they learn how to lead female tellers and how to help them learn and develop.

LEARNING AT DENTSU:

A Training and Education System

Dentsu Incorporated, founded in 1901, recently celebrated its 80th birthday and, in 1973, became the largest advertising company in the world. With its head office in Tokyo, its domestic and overseas network includes 4 regional offices in Japan, 24 branch offices in Japan, and 14 overseas offices, the most recent being the Beijing office in China. Dentsu is a pioneer in the modernization and systematization of the advertising world, the first advertising agency in Japan to introduce a large-scale computer system and to develop a total information industry for international operations.

One of the two executive vice-presidents is in charge of a personnel division which includes education, personnel, welfare, and labor relations. The president has recently pointed to their human resources development program and indicated plans for the expansion of manager training, on-the-job foreign language education, and a system for motivating self-improvement. The company's 5,534 employees are supplemented by another 1,500 in Dentsu's subsidiaries and affiliates.

Responsibility for the training and development of employees is shared by the Corporate Education Department and the supervisors, with the responsibility for on-the-job development clearly assigned to the supervisors. The manager of the education department makes an annual plan for the training to be offered, receiving information as to needs from managers, from employees, particularly from those who participate in courses, and from discussing learning needs with the personnel division. The total plan goes up to top management and, after it has been reviewed, discussed, and given final agreement by all concerned, it becomes the basis for a bulletin

for the next year, outlining all courses, dates, and the process for application and selection. It includes both required and voluntary courses and is posted on all bulletin boards.

The required training closely parallels the promotion of the new male employee from his entrance job up through the management ranks. Managerial courses are given for managers of departments, branch offices, and managers of divisions. Also, courses in conceptual skills are offered for all managers, covering subjects such as creative problem solving and decision making.

Women employees receive a regular training course for all women, a documentation seminar, a writing skill course, a speech seminar, and a leader training course.

Dentsu offers many voluntary programs on such subjects as sales promotion design, information search process, sales promotion planning ability, distribution, and retailing. Overseas training provides opportunities to attend universities either in Tokyo or in the United States. A record of Japanese executives having received either an MBA or other management training at Harvard includes a very large number of Dentsu managers. When one estimates the cost of such education, either in the U.S. or in Europe, including the cost of transportation, housing, family members, and tuition, one realizes the enormous investment made in the development of managerial personnel at Dentsu.

Dentsu's Training Center at Kamakura, about one hour by train from Tokyo, is further evidence of the support given to the development of human resources in this company. At the edge of Kamakura lies a modern building nestled against the wooded hills. The environment is excellent, and the facilities provide comfortable bedrooms, dining hall, small study halls with well-stocked libraries, and a TV and game room.

Outside are facilities for sports. A director and assistant supervise a well-run and enriching operation.

Sitting in on a class provides the visitor with a first-hand documentary of the effectiveness of their group seminar.* This one was on the subject of distribution and retailing. Thirty men sat at desk tables in a conference-type pattern. A coordinator introduced the visiting lecturer, a specialist in retailing with Kikkoman Company (makers of soya sauce), but in this instance the discussion centered on "man's wine", an increasingly popular sales item in Japan. The purpose was to provide the Dentsu manager with an understanding of business methods of firms with which they deal. Following his presentation, a lively discussion was held. The attention of the students was excellent, even though the time was directly after luncheon, and the day was hot and humid. Talking with several participants provided one with a strong feeling that they were highly motivated, appreciated opportunities such as these, and were very career-oriented.

It is no wonder that in the past year over one-half of Dentsu's employees participated in some course of training. The support of the firm is also given to self-development. After managers recommend an employee, an Education Committee reviews the application, while an Admission Committee interviews the applicant to determine his goals and capabilities to use the training.

Dentsu offers a Summer Seminar to promote the theory and technique of advertising using university professors, top executives of leading companies, and experts on advertising and public relations. It is also

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*A three-day course covering general theory of distribution, distribution channels, and marketing using both academic specialists and businessmen; methods used are lecture, discussion, case studies, and problem solving.

attended by advertising and planning staffs of companies, newspapers, broadcasting stations, and an increasing number of college students.

FUJITSU'S TRAINING AND EDUCATION SYSTEM:

A Continuous Learning Program

Established in 1935, Fujitsu Limited today ranks as Japan's top computer manufacturer and one of the world's leading manufacturers of telecommunications systems and equipment. It is also a producer of semiconductors and other advanced electronic components. Currently, Fujitsu has 34,000 employees working at twelve plants, a variety of research and development facilities and educational institutions, including an Education Center in Hawaii, the Fujitsu Information Processing Systems Laboratory in Tokyo, a Customer Training Center at Kawasaki, Japan, The Japanese American Institute of Management Science (JAIMS) in Hawaii, and the Fujitsu Institute of Management (FIMAT), in Tokyo. Besides a large number of domestic agencies, plants, and business offices in Japan, Fujitsu has overseas offices situated throughout the world. Fujitsu and TRW of the United States have formed a joint venture in Southern California to commence sales of a variety of Fujitsu products, including small- and medium-scale computer systems.

Organizational Aspects

Of the eight principal departments, Training and Education is located in the Personnel Department. In explaining the outstanding growth of Fujitsu's worldwide market, much credit is given to their in-depth educational programs which are believed to have kept Fujitsu at the forefront of the industry, concentrating on high-quality, high-reliability products of outstanding workmanship. In the area of education, there are ongoing programs to keep users abreast of the latest technology and to provide continuous revitalization for Fujitsu's employees.

In making reference to "who could have done a thing like this" (meaning their remarkable growth), it is interesting to note that the answer is "the Fujitsu Family." What are the major parts of Fujitsu's education and training system?

Fujitsu Information Processing Systems Laboratory

Established in 1970 in Tokyo, this Laboratory's functions are to: (1) conduct research toward the development of new, advanced computer application techniques; and (2) provide training programs in all aspects of computer science to users as well as to the Fujitsu staff. It is interesting to note that their research stresses techniques to solve managerial problems through computer science techniques. They work on such topics as management science, management control and planning, information retrieval, engineering and scientific disciplines, and software engineering. As a computer training center, the Laboratory provides a course curriculum covering both computer science theory as well as the more practical aspects of computer usage. Courses are designed to meet the diverse needs of all participants, whether they be basic programmers and computer operators or more advanced members of the top management class, EDP managers, or systems analysts. To date over 270,000 persons have been given courses in the Laboratory's educational program.

Japanese American Institute of Management Science

JAIMS was established in January 1972 as an independent, nonprofit educational institution dedicated to education and research in the fields of computer technology and management science. The core of JAIM's activities is its two international management programs: The Japanese Management Program (JMP) and the American Management Program (AMP).

Japanese Management Program is a nine-month program which provides the opportunity for American and other English-speaking students to study Japanese management concepts and business methods. As the program's highlight, during the final four months of JMP, each student relocates to Japan for a period of internship with a Japanese company.

American Management Program is a five-month program designed for Japanese and other Americans interested in learning American management concepts and business methods. Upon completion of the course of study in Hawaii, students participate in a brief field study on the U.S. mainland. The programs of study and education differ substantially from the broad theoretical programs typically offered by universities. At JAIMS, the gap between theory and practice is reduced by emphasizing practical application based on actual business cases and simulations, always maintaining the highest standards of both academic instruction and practical experience.

Customer Training Center

The Customer Training Center (CTC) was established at Kawasaki Works in 1976 to provide personnel from overseas customer sites with lectures and hands-on training in telecommunications systems and equipment. The courses are designed to offer full knowledge and skills necessary for the operation and maintenance of relevant equipment. Subjects include system design, equipment features, circuit and program tracing, performance testing, fault locating, and troubleshooting. Courses and practice sessions are conducted and supervised by a permanent staff, augmented by specialists from various engineering departments at the Kawasaki Works when necessary. To date more than 550 personnel from customers in 31 nations have undergone training at this center.

The Fujitsu Institute of Management (FIMAT)

FIMAT was founded in March 1979 to provide special management-level instruction for persons working for Fujitsu and its associated firms. The goal of FIMAT is to help produce top-level managers and technical experts who will be able to cope with the ever-changing demands facing management in the future. Administration of the school requires two managers, seven staff, and costs one million dollars a year. The main feature of this school is its FIMAT Intensive Course.

The background of the initiation of this course shows that most of the current top managers went through Fujitsu's period of high growth and lacked the chance for education and management training. Although training responsibilities are decentralized to the organization where these managers work, and initial training in the technological and engineering aspects had been given them in the earlier periods of their employment, a centralized approach to the development of management skills using Fujitsu's management approach was still lacking. This course has been designed to provide the kind of Fujitsu management training needed by managers at the 45-year-age period. Fujitsu feels that this period is very significant in the life cycle, since lifetime employment from 22-23 years of age to 60-65 places the age of 45 in the middle.

The FIMAT Intensive Course program is centralized, and all white-collar managers at the age of 45 are brought to this institute for this three-month course. The institute presents three sessions of this course during a year, thus, it is open year-round. A class averages 70 persons a session, and over 200 complete it per year.

Description of the course. The first two months are common to all participants. Out of 42 days, 14 are devoted to management training using

the case method. Five days are then devoted to a group training session at Mt. Fuji Management School, including the Fujitsu Management Decision Support System (which is computerized) for corporate planning based on using the terminals. There are also five days scheduled on liberal arts, topics of today, music, art, literature, religions, and play time. The liberal arts portion was designed to help managers in areas for which they have little background, and it has been unexpectedly well-received by the students.

Included in the session are discussions with the Chairman of the Board and the Vice-Chairman for a two- to three-hour session. Twenty-two directors from Fujitsu organizations share their knowledge and experience, so that all learn from each other. The students learn what is being done in other departments, and this reinforces their goal of acquiring generalized knowledge about computers and telecommunications. As managers do specialize to some extent, this provides them with the opportunity to learn more of Fujitsu and to become better equipped to assume larger responsibilities. Also, the course includes topics of current interest, major social and economic issues, and the international economic and political situation. Often a newspaper reporter as well as distinguished academics are brought in to give the students insights into these areas. After completing the two-month training on general subjects, participants return to their original jobs for three months; they then go back to FIMAT to receive the final month of specialty training.

The third month is devoted to training for the future with special instruction oriented toward each person's expected future assignment. Students choose among three kinds of possible future assignments for

which they can develop themselves with assistance from Fujitsu's education and training system:

- Manager of a sales office (overseas or in Japan);
- A prospective top manager of the corporation;
- A leader/manager in an associated firm or subsidiary.

The personnel department becomes involved in this process by reviewing choices and sometimes asking the student to change his choice based on a review of records and performance. This sorting-out process helps to determine those who have the chance to become leaders in the future.

Feedback is obtained on these sessions in several ways. Each class makes evaluations of the contents on a 5-step scale. Once a week, informal luncheon meetings are held during which there are discussions and reviews of what has been learned including a review of lecturers to be assigned for the next session. The Personnel Division follows through on the choices of the participants as well as on their development programs.

LEARNING AT JAPAN AIRLINES (JAL):

A Continuous Training and Education System

Japan Airlines, established in 1951 as the national flag carrier for Japan, serves 53 cities in 33 countries. It stands first in the ratings of internationally scheduled cargo airlines and ranks third among the world's scheduled international airlines in terms of traffic performance. It has a total of 42 associated companies, including airlines, tour wholesalers, hotels, in-flight catering, airport ground services, airport limousine service, air cargo storage and handling, fueling services, insurance, printing, and real estate. Their JALCOM III provides for computerized ticket printing, quick schedule changes, continuous software updates, and simulation of all computer transaction capabilities for training purposes. Overall mechanization has made rapid progress at JAL.

"An enterprise is its personnel" is the basic philosophy of JAL. This spirit is continually apparent throughout management's emphasis on the importance of education and training in the development of their human resources. This is well-illustrated in statements of five recently elected members of their Board of Directors regarding their goals:

- promotion of overseas, locally hired staff into positions now filled by home office staff;
- the development of younger staff to sustain the company in the future;
- creation of an atmosphere in which all can work together harmoniously;
- encouragement of staff's participation in running the organization (to make it like the Japanese food "nato," fermented beans which stick together like glue);

- provision of opportunities for a variety of experiences to enable employees to gain confidence and pride in their work;

- changing of personnel policies to close gaps between staff capabilities and available positions;

- nurturing each member's talents so that they can be used effectively.

At JAL there are many ways in which top management plays a leading role in the encouragement and maintenance of a continuous learning program based on demonstrated needs, clear objectives, and continuing assessment of progress demonstrated through learning:

- they emphasize the importance of making the organization a place where managers and employees cooperate equally to the end that they grow and prosper together;

- they believe that by aiding personnel in their endeavors to improve their capabilities, their people will carry out duties at a high level of efficiency and with a strong sense of responsibility and cooperativeness to maximize organizational performance;

- they approve the Guidelines for General Education each year, as discussed by their Education Council (which consists of the Administrative General Managers in charge of each department). The guidelines are the agreed-upon ways to deal with problems and tasks caused by changes in the company's personnel composition resulting from economic, social, and value changes;

- they back the Training and Education staff in introducing continuous learning technology from the United States and Europe, such as Training within Industry, Management by Objectives, Business Games (although they have developed their own airline business games), Grid Theory, etc.;

- they support continuous learning, especially in groups, to compensate for the lack of communication often arising in a large complex organization and also to achieve flexibility among workers;

- they recognize the importance of the strategic investment in human resource development by assigning talented staff, allotting a good portion of budget, and keeping an appropriate organizational structure in place to support it;

- they make periodic changes in employees' working places as the need arises, believing that it develops the abilities of employees, lifts their morale, and brings a sense of belonging to the company and a loyalty that results in both employee and company growth;
- they participate in courses as speakers or guest lecturers.

Organization of the Training and Education Function

Training and education is a part of the total personnel function which is organized into three areas:

1. Personnel Development, which includes training;
2. Organization and Personnel Administration, which makes the periodic changes of personnel, keeps track of records, salaries, seniority, and rank;
3. Industrial Relations, which includes relations with labor unions, benefits, and allowances for personnel.

An Education Council, which consists of administrative general managers in charge of each department, reviews, discusses, and recommends the total Training and Education program to the Board of Directors.

The responsibilities for the training and development of personnel are divided between top management, the Training and Education staff, and the line managers. There is close coordination between these; for example, the Training and Education staff ask managers what their subordinates expect to become, and managers follow up courses in which their subordinates have participated and provide Training and Education with information on the needs of their employees for training.

Before reviewing the various kinds of training, learning, and education, it will be helpful to discuss those factors which influence and make possible the JAL continuous training/learning system. It is the integration of these organizational factors that puts JAL in a

flexible learning framework that enables its people to adapt continuously to change and to keep learning and growing.

Personnel systems. As in other large Japanese companies, JAL follows the principle of lifetime employment and promotion based on seniority. This makes training a worthwhile investment both to the company, which can realize the benefits from long-term employees, and to the employees, who feel the security of their employment.

Recruitment and placement are closely related to the development of their personnel. For example, a new recruit is regarded as a whole person to be developed for many jobs during the course of his career for the company, rather than employed for a certain vacancy. Most hires are made once a year, at the time of graduation from college or high school, and recruits are not tested for technical skills since the company provides the necessary technical training.

Evaluation and promotion also are closely related to the development of their personnel. Promotion is based on seniority, provided enough service years have been completed and their performance evaluations are good or above. Evaluations are made by the general manager, the manager, and the supervisor on attitude, abilities, and performance achievements. Those involved in making evaluations are given training on how to evaluate. Evaluations are completed after interviews have been held with employees, and employees receive evaluation feedback.

Career development paths show employees the career routes they can follow. The first assignment is in the line office. Newly hired crew members do ground duty for four to six months. Newly hired staff (college graduates) perform cabin crew duty, an overseas assignment, and at least two or three line duties before a principal path is set. This

provides a variety of experiences as well as the opportunity to see in which line of work one is most capable.

Salary and wage classification systems, as we know them in the United States, are not used. Rather, there are general categories, and within these there are six levels. The categories are:

1. Office work and general administration;
2. Sales and marketing;
3. Traffic/passenger service;
4. Maintenance.

The levels (from top down) are:

1. General Manager, Director, Deputy General Manager;
2. Assistant to General Manager;
3. District Manager, Senior Manager, Chief Manager;
4. Managerial and Assistant Manager;
5. Supervisor, Senior Agent, Staff Assistant;
6. Rank and File (first, second, and third).

Managers' and supervisors' style. These have an important impact on subordinates' development. The "boss" provides an example, acts as an advisor, and improves the cultural climate. He sees that on-the-job training is provided, or he may do it himself. He reinforces the training in which his subordinates participate through knowing what the subordinates expect to become in the organization. He prepares the participants and follows-up on the results of training.

Design of work and assignment to employees. This influences the growth and learning of employees. Job rotation brings new challenges and stretches the abilities of employees. Group-learning activities, such as Zero Defects and Quality Control Circles, also stimulate the

growth of employees and contribute to the effectiveness and productivity of the company. In those parts of the company where there is a flat organization, and sections have been abolished, it is possible to assign employees to different projects without being restricted by business hierarchy.

The Determination of Training Needs and Follow Through on Programs

Top management is concerned with needs that influence the effectiveness of the organization, and line management knows what is needed to bring about better production and more motivated employees.

Top management gets its information on Training and Education needs from several sources: the President's addresses on taking office, at various company celebrations, at press interviews, and in speeches at training sessions; corporate four-year middle-range plans; the Board of Directors' reports; information from the Vice-President in charge of Education and Training; information from head office departments; information from the Vice-President in charge of Corporate Planning and Finance; and from Sales, Traffic, Cargo, Maintenance, and Operations.

Line management's needs are determined from field surveys conducted by the Training and Education Department, from participants in courses, and from people outside the company (passengers and shippers).

The process by which training needs are brought together as a program basis for action includes the following steps: drafting of the Guidelines for the Four-Year Middle-Range Education Plan; drafting the Annual Plan for the next fiscal year; studying of both drafts by line managers, and discussing them at a meeting of the representatives in charge of education and training at each line office; amending the draft as necessary by the Education and Training staff; and presenting the final draft to the

Education Council. This draft then goes through the process of Ringi-Kessai (decision making from the bottom up -- from lowest supervisory level to top management and finally to the Board of Directors). The Training and Education staff explains the final decision at a meeting of the Education Council, and the Green Guide is published which outlines the program to be followed, program objectives, outlines of courses, course contents, and the number of participants.

The initiation of courses starts with the basic design being prepared by the Training and Education staff. Then a senior instructor in charge makes the final design with the assistance of subordinates. Participants are selected for compulsory courses (those usually for managers in the line of promotion) by the nomination of the Training and Education staff. In the cases of newly recruited or promoted staff, the Organization and Personnel Administration of Personnel makes the selection. In optional courses, participants can request attendance through their managers to the Training and Education group. The kinds of training are:

- General education, which provides the basic manager with supervisory capabilities, is generally given by the central Training and Education staff;
- Professional training provides technical and professional capabilities for pilots, cabin attendants, maintenance mechanics, and sales and traffic service staff. It is generally provided by the training staff of departments either through sessions or daily work activities;
- Self-development is encouraged through a variety of opportunities in which employees may study voluntarily;
- On-the-job training is provided through the line managers. In addition to the day-to-day, on-the-job learning, special provision is made for rotation and for tutors;
- Rotation is provided for through the career path system of the personnel department. Employees gain experience through a wide range of jobs which provide an excellent background for whatever specialization they may enter. For example,

a passenger specialist needs knowledge with regard to international and domestic flights, outside and inside sales, traffic, etc.;

- Tutors are provided for newly employed or newly transferred employees. The length of time depends on individual needs. During the first three months, tutors are assigned on a man-to-man basis;

- Special work assignments are made to project teams, Research and Development, and personnel are loaned to JAL-affiliated companies or to government or semi-government agencies.

Evaluation of training and education are made through the following:

- Questionnaires are filled out by participants and analyzed by the Training and Education staff;

- Self-evaluations are made by course leaders;

- Managers of the participants answer questionnaires sent by Training and Education and also express their evaluations during the field survey;

- A composite evaluation is made and compared with previous ones;

- Individual training needs, as originally reported by supervisors on their employees, are matched with the evaluations.

Finally, the evaluations are reported to the Executive Committee.

Training for International Management

JAL has special training programs for the 660 Japanese staff overseas and the 3300 locally hired employees. For the Japanese staff newly assigned to overseas posts, this includes policies, technical knowledge, management skills, interdisciplinary knowledge and skills, foreign languages, adaptation to local culture, and healthy family life. Special emphasis is placed on what locally employed staff expect of Japanese managers. Included are local staff's participation in decision-making discussions, a daily dialogue with each staff member, and listening to descriptions of local culture. Other parts of the training include

discipline in the office, consistency of management, delegation, human relations, and evaluations.

For locally employed staff on the managerial level, training includes observation trips with flight crews, attendant training center, learning basic management functions, learning the profile of Japanese management and culture, and discussing the features and shortcomings of JAL management.

JAL has provided individual coaching for managers in local offices with feedback to Japanese managers. Special care is taken to work for harmony and cooperative teamwork.

JAPANESE NATIONAL RAILWAYS TRAINING AND EDUCATION

The Japanese National Railways (JNR) has been operated by the Japanese government since the first railways were opened between Shimbashi (Tokyo) and Yokohama in 1872. In 1949, JNR was established as a public corporation under the Japanese National Railways Law. It now operates railway lines, both passenger and freight, including the famous Shinkansen (bullet train), ferry lines, and busses throughout the entire country.

The number of personnel, now 420,000, has been reduced from a high of 462,000 in 1965. Its financial rehabilitation program, with its objective of wiping out the deficit by 1985, contemplates a further reduction of 94,000 employees to bring the total work force to 350,000 and to commission outsiders to handle work inside freight cars, car inspection and maintenance, track maintenance, ticket printing, and full mechanization of local stations.

Personnel include practically every kind of worker; however, the largest number of workers are civil engineers, construction technicians, mechanics, and design engineers.

Basic Policy of Education and Training

The education and training of personnel forms the very foundation of the progress and development of the enterprise itself. The continuous training and school system operates under the basic policy of the following principles:

- The aims of education and training are character building, cultivating knowledge, perfecting skill, and developing men into sound personnel who are enterprise-conscious and instilled with the spirit of public service.

- Education and training is for all personnel and shall be carried out in every opportunity and at all places.

- Personnel are not only required to take necessary training, but also must strive continuously toward the building of their character. Also, they are held responsible for acquiring and refining the knowledge and techniques necessary to their jobs.

- Managerial supervisors are required to have a full grasp of the actual conditions and trends of management and of the merits, abilities, and aptitudes of their men. Further, they are required to know accurately the type of education and training needed for their personnel and to see that the necessary education and training is carried out.[1]

Training and Education Functions

At Japanese National Railways, the training and education function is managed by the Employee Development Division, a part of the Staff Relations Department which also includes labor relations, wages, welfare, and health. The Employee Development Division is divided into two major branches: one is Education and Training, which handles all the courses given by Japanese National Railway Schools; the other is the self-development branch. They are staffed by ten members, a chief and assistant manager, and three staff members for each branch.

Recruitment and Employment

New employees are hired in April at graduation time in two main categories: high school graduates and university graduates.

High school graduates spend the first six months, April to October, as trainees. They are then placed in transportation and communications (non-engineering) for one month and later into maintenance and track for three months. In their introduction they are told, "you are no longer a

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[1]JNR Central Railway Training School.

student; you are now working for the Japanese National Railways." Expectations are outlined, and new hires are given beginning insights into the whole organization and what each can do for his own self-development. Thus, it is the beginning of motivation to be a good producer. They live in dormitories of the Japanese National Railways. They have individually assigned tutors to help them learn on the job. Under the traditional custom of "sempai kohai," workers choose from their peer group (fellow freshmen or newcomers) one or two other workers to act as counselors. They experience practice in the real day-to-day operations, and in six months they go from trainee to regular status as Japanese National Railway employees.

University graduates are headed for executive positions. They spend the first two months learning one aspect of JNR's operations on the job. They are then brought back to the head office for a period in which they learn of the different fields of JNR operations such as management, finance, and accounting. After one year of this training, they are rotated to a chief of section position in a local office. After two years, they are returned to the head office where they work as an assistant for two years. They are then assigned to a region.

Thus, the recruitment and first years of experience through rotation illustrate how JNR integrates learning, training, and development with recruitment and placement functions. It is all carefully planned.

Method and System of Education and Training

Three methods are employed in the education and training of Japanese National Railway personnel: inservice training, education and training at JNR educational institutions, and education at non-JNR institutions.

Inservice training. Supervisors and managers train their subordinates on the job and counsel them on their self-development plans.

Education and training at JNR educational institutions. This may be regular, reassignment, refresher training, or retraining; in any case, it is the kind of education and training that is beyond the reach of the supervisor. There are a number of JNR educational institutions shown in Table 1 below.

Table 1

JNR Educational Institutions

CLASSIFICATION	LOCATION	PURPOSE
Central Railway Training School (1)	Tokyo	To educate and train upper-class employees, such as managerial and supervisory staff, and to produce future managerial and supervisory staff members on a system-wide basis.
Class 1 Railway Training Schools (8)	Sapporo, Sendai, Omiya, Nagoya, Osaka, Hiroshima, Kita-Kyushu	To educate and train primary-class supervisors and middle-class employees
Class 2 Railway Training Schools (22)	Kushiro, Asahigawa, Hakodate, Morioka, Akita, Takasaki, Mito, Chiba, Tokyo, Atami, Nagano, Shizuoka, Kanazawa, Kashiwabara, Fukuchiyama, Tosu, Oita, Kumamoto, Kagoshima	To educate and train primary-class and newly recruited employees

The Central Railway Training School has 61 classrooms, 4 special rooms for audio-visual and language laboratories, as well as libraries, dormitories, gymnasiums, field tracks, and athletic grounds, plus 6 laboratories for rolling stock, electric power, signal, telecommunication, machines, and tools. The school has a Superintendent and an Assistant Superintendent, four administrative departments, as well as departments of educational affairs, educational techniques, a management and supervisory training department, and five instruction departments. Table 2, on the following pages, briefly describes courses offered by this Central Railway Training School.

Table 2

Descriptions in Brief of Training Courses at JNR Training School

COURSE	TYPE	CLASS	TRAINING PERIOD	PURPOSE	NUMBER TRAINED PER YEAR
Supervisory Training	Retraining	Training of departmental and sectional chief-level personnel	5 days	Training in managerial and administrative knowledge and skills	400
		Training in management theories	14-21 days	Training of college graduates as executive candidates	150
		Training of field supervisors	5 days	Training in administrative and supervisory knowledge and skills	140
		Ferryboat captains and engineers	5 days	Administrative and supervisory knowledge, skills demanded in operating ferries in safety	60
		School instructors	3-26 days	Knowledge and skills demanded of school instructors	640
		Instructors	12-20 days	Knowledge and skills demanded of instructors of supervisory instructors	610
		Training in administration and supervision	5-47 days	Knowledge and skills demanded of administrative personnel and field supervisors.	1,360

Table 2 (Cont.)

Descriptions in Brief of Training Courses at JNR Training School

COURSE	TYPE	CLASS	TRAINING PERIOD	PURPOSE	NUMBER TRAINED PER YEAR
University Graduates	Regular	Section I	1st half 2 months, 2nd half 1 month	To educate university graduates employed as executive candidates	80
		Section III	1st period 3 months, middle period 3 months, final period 3 months	To educate technical college graduates employed as executive candidates	140
University Level	Regular	Administration, Mechanical Engineering, Civil Engineering, Architectural Engineering, Electrical Engineering	3 years	To educate the trainees to be executive staff members	540
Higher Training	Regular	Transportation, Railway Police, Motorcar Transportation, Train Operation, Inspection and Repair, Operation Administration, Rolling Stock Inspection and Repair Chief, Machines and Tools Control, Machines and Tools Administration	1-4 months	To educate trainees to be primary supervisors for field work	1,040

Table 2 (Cont.)

Descriptions in Brief of Training Courses at JNR Training School

COURSE	TYPE	CLASS	TRAINING PERIOD	PURPOSE	NUMBER TRAINED PER YEAR
Higher Training	Reassignment	Shinkansen Inspection and Repair	.75 months	To educate primary supervisors when jobs or operations are drastically changed	90
	Retraining	Shinkansen Technical Supervisory	2.25 months		
		English, Accounting, Assets, Purchasing and Stores, Passenger Traffic, Baggage & Express Freight Traffic, Railway Police, Motorcars, Train Operation, Facilities Operation Instruction, Operation Safety Maintenance, Rolling Stock Inspection, Rolling Stock Repair, Machines and Tools, Technology, Rolling Stock Design, Machines and Tools Inspection, Machines and Tools Facilities	3 months to 4 months	To educate primary executive personnel for field work when technical renovation takes place	4,400
		Track and Structures Administration, Track Maintenance, Construction, Structure Inspection, Construction Work, Contracting, Design Consultation, Architectural Design, Works Compensation			

Table 2 (Cont.)

Descriptions in Brief of Training Courses at JNR Training School

COURSE	TYPE	CLASS	TRAINING PERIOD	PURPOSE	NUMBER TRAINED PER YEAR
Higher Training (continued)	Retraining	Environmental Preservation, Heavy Machinery Control, Mechanical Works, Developed Machines Power Facilities and Machine Checkup, Electric Power, Electric Dispatching, CTC, Signal Facilities, Telephone Exchange, Terminal Set, Trolley Line Maintenance, Special Repair Data Exchange System, Telephone Instruction, Mars Central Apparatus, System Programming, COBOL, FORTRAN, Ferry Control	3 months to 4 months	To educate primary executive personnel for field work when technical renovation takes place	4,400
Common Training	Regular	Powered Car (Shinkansen), Track Maintenance (Shinkansen), Mechanized Track Maintenance, Machinery Electric (Shinkansen), Computer, Chief Deck, Chief Fireman, Cabin Chief	.75 months to 11 months	To educate trainees to become mid-level field personnel	280

Table 2 (Cont.)

Descriptions in Brief of Training Courses at JNR Training School

COURSE	TYPE	CLASS	TRAINING PERIOD	PURPOSE	NUMBER TRAINED PER YEAR
Common Training (Continued)	Reassignment	Shinkansen Train Motormen, Shinkansen Electric	.75 months to 9 months	To educate mid-level field personnel for new jobs when jobs and operation methods have changed	810
	Retraining	Shinkansen Track Maintenance, Shinkansen Mechanized Track Maintenance, Machinery, Machinery Special Repair	.5 months to 2.25 months	To educate when technical renovation takes place	530
Primary Training	Regular	Track and Structure (Shinkansen)	1.5 months	To educate primary-level field personnel when employed	50

CONTINUOUS LEARNING IN MITSUI:

The Training and Education Systems of Mitsui Company

Mitsui and Company, first established in 1876, is one of the world's largest general trading companies. It provides a full range of services for trade and economic development, including distribution, financing, information for trade, import, export, and domestic offshore transactions. With a network of 193 offices throughout the world, and branch offices in all the world's major business centers, it has exported technologies developed in Japan to both industrialized and developing nations. Mitsui and Company has played the role of organizer and leader for the Mitsui Group of companies since the pre-war period, the number of which is in the hundreds. Mitsui and Company call themselves "The Transactionalists," because they provide these full and closely integrated services "trans" (across) and "action" for nearly every possible kind of trade and economic development throughout the world. It is truly a great "sogo shosha," an almost uniquely Japanese institution that operates like an extended family, following the principles of filial piety and loyalty both within their companies and in dealings with the clients they serve.

Mitsui and Company are aware that the foundation of their continuing success is a well-trained and developed work force. The average employee has been with the company for about 15 years. Virtually all of those in Japan are college educated with emphasis on diverse specialities. Certain personnel are sent through a company-paid Master's in Business Administration (MBA), while others are trained in various specialty fields. At the time of its founding, Mitsui had a staff of 16 and a single office in Japan. Today, the Company has a staff of more

than 13,000, including 85 different nationalities, and maintains branch offices in all of the world's major business centers. In 1973 a new personnel system for the development of human resources was initiated.

From an organizational standpoint, the Personnel Department is one of the fifteen major divisions of Mitsui's Head Office. One of the five Executive Vice-Presidents is the General Manager of Personnel. The Personnel Division is basically a staff group to the Board of Directors. It has a staff of 130 members and is composed of 10 departments:

1. General Affairs Section - maintenance of personnel records;
2. General Planning Department - planning of overall personnel systems;
3. Career Development Department - planning and implementation of promotion, evaluation, assignment, and retirement (career staff only);
4. Personnel Development Department - planning and implementation of recruiting and training (relative to all staff), planning and implementation of promotion, evaluation, assignment, and retirement (relative only to clerical staff);
5. Overseas Department - planning and implementation of salary and fringe benefits for overseas offices, arrangements for overseas movement of personal effects and visas, etc.;
6. Employee Relations Department - bargaining with trade unions as to salaries, bonuses, and fringe benefits;
7. Employee Welfare Department - Implementation of programs relating to salaries and fringe benefits;
8. Reemployment and Consulting Service Department - consulting service for retiring personnel;
9. Health Promotion Department - health of company personnel;
10. Clinic.

Mitsui has a total of 13,300 personnel:

- Career staff

Japan	5800	
Overseas	1200	7000

- Clerical staff — 4000 (mainly female)
- Local national staff — 2300 (overseas)

Personnel System

Since training is closely integrated with the personnel systems, particularly with recruitment, promotion, and career development, a description of these will help to explain the Training and Education System of Mitsui.

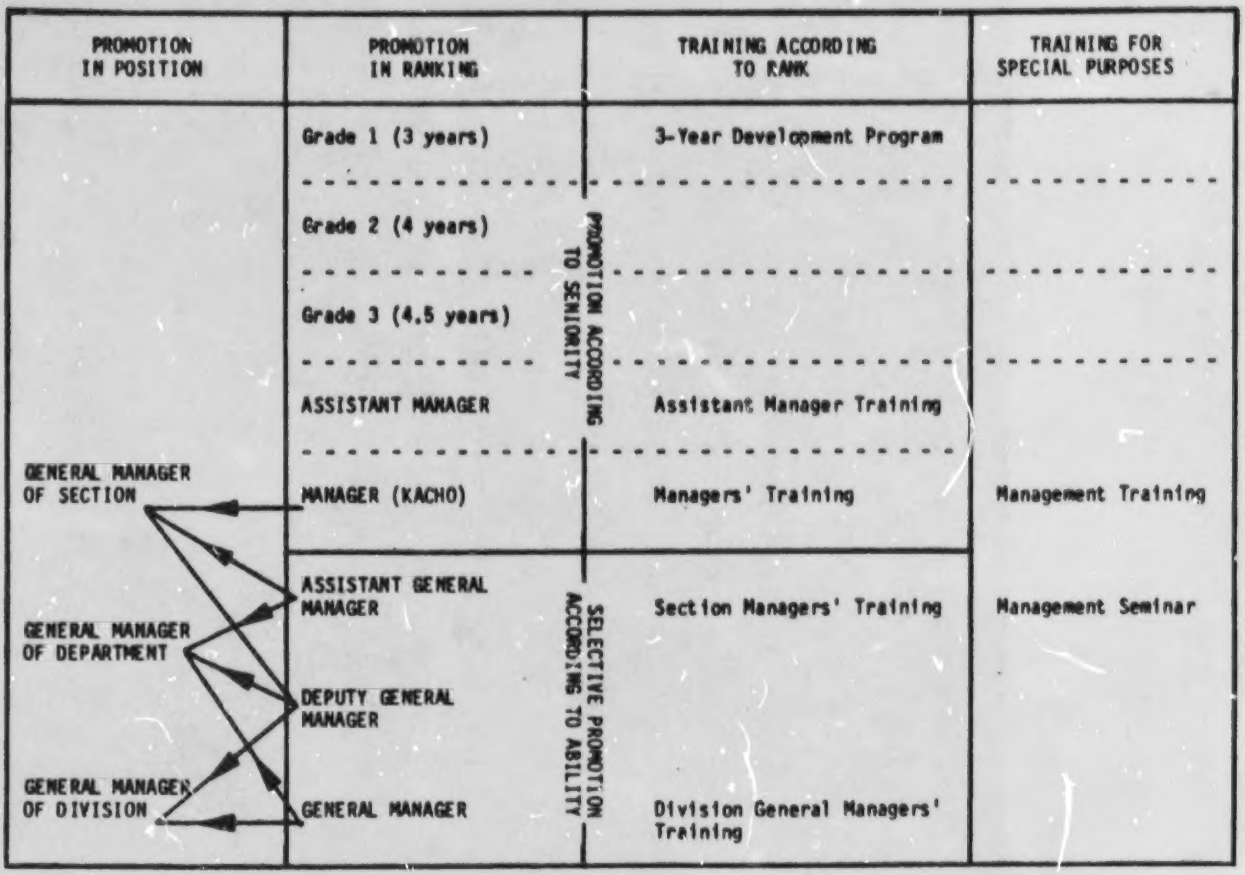
Recruitment. The recruitment occurs primarily during April at the time of graduation from high schools, colleges, and universities. The emphasis is on the selection of the university graduate, since the career staff is the largest and most important group.

Promotion. Promotion for the first 11-12 years goes according to seniority, that is up to the rank of assistant manager, through grades 1, 2, and 3 (see Chart 1: Promotion, Ranking, Development, and Training in Mitsui and Company on page 62). After that, promotion is selective according to ability.

Career development. For the most part, college graduates look forward to lifetime employment. They enter at 22 or 23 years of age as "raw material," and the company assumes a major responsibility for their development. The fact that these future managers and executives will continue to work for Mitsui until 57 years of age makes their policy of continual training programs, during the whole period between recruitment and retirement, of value both financially and from the standpoint of morale.

CHART 1

PROMOTION, RANKING, DEVELOPMENT, AND TRAINING IN MITSUI AND COMPANY*



*NOTE: See content of specific programs in Chart 2: Content Outline of Mitsui Programs for Training and Development on page 65.

The young intern is rotated to a wide variety of assignments and becomes a generalist early. It is interesting to note that when asked what such a newcomer does, he replies "I work for Mitsui" rather than thinking of himself or of his role as a specialist in accounting, or computer programming, or in some other area of expertise. The period for rotation is generally about five years, and each intern is assigned into such functions as accounting, finance, and various other support groups. Later, they are transferred to business. In the case of promotion and assignments, each individual case is routed through the top director of a division, the Personnel Division, and to the Board of Directors.

Performance feedback. Once a year, opportunity is provided for performance evaluations and feedback to those in their developmental periods.

Education and Training Systems

Mitsui uses a combination of methods for the development of its human resources (see Chart 2: Content Outline of Mitsui Programs for Training and Development on page 65):

On-the-job training is of several types:

- First, the supervisor is held responsible for the development of those under his management. Guidelines are issued for each division, especially for the first three-year period, which look at the newcomers as raw material that needs to be shaped.
- Man-to-man tutoring is used where a tutor in the same section is assigned to help a newcomer learn. During the first six months, one of the young staff with four to five years of experience is assigned as a leader to give overall guidance.
- Also, the newcomer can select, under the traditional sempai-kohai arrangement, one or more of his "classmates" to counsel him.
- Another method is the use of "instructors." Leaders from supporting systems hold sessions, seminars, and lectures. The newcomers are organized into groups of 50 to 70 and attend, 2-3 hours a day for a month, a total of approximately 60 hours. The instructors, or support people, have from 5-10

years of experience in a variety of operations and functions. Also, this three-year acquisition of fundamental knowledge for business execution is checked by assessment tests developed by the training team from the Head Office Personnel Department (see Chart 3: 3-Year Development Program Checklist for 8-Kyuushoku Staff on page 66). This program is sent to all offices including those overseas. It is an excellent example of how to give the newcomer a sense of the objectives toward which he is working.

- Also, Mitsui uses small-group discussions, such as Quality Control Circles and voluntary meetings, in which the newcomer learns to put forth his/her own ideas and learns how to support the group's efforts to help the organization become more effective on the job.

Off-the-job training and education is of several types (see Chart 1: Promotion, Ranking, Development, and Training in Mitsui and Company on page 62).

- Off-the-job training options given according to rank are: 3-day Manager Training Program at 4 levels -- Assistant Manager, Manager, Section Manager, and Division Managers. These options are geared to positions on the promotion ladder.

- Training which is given for special purposes includes overseas training (types A and B), management training, management seminars, and languages. This training is geared to present and future assignments.

On the following pages, general descriptions of various Mitsui training and development programs are presented.

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CHART 2

CONTENT OUTLINE OF MITSUI PROGRAMS FOR TRAINING AND DEVELOPMENT

TRAINING ACCORDING TO RANK

I. 3-YEAR DEVELOPMENT PROGRAM FOR GRADE I PERSONNEL

A. INTRODUCTORY TRAINING.

1. 10 DAYS ON ENTERING AS "RAW MATERIAL."

2. GENERAL GUIDANCE.

A. RECOGNITION OF CHANGE IN SOCIAL STATUS.

B. GUIDANCE ON COMPANY ACTIVITIES, ORGANIZATIONS, ETC.

B. MAN-TO-MAN LEADER SYSTEM.

1. DURING THE FIRST 6 MONTHS, ONE OF YOUNG STAFF WITH 4-5 YEARS EXPERIENCE IS ASSIGNED A LEADER TO GIVE OVERALL GUIDANCE, INCLUDING SOCIAL LIFE.

C. ACQUISITION OF FUNDAMENTAL KNOWLEDGE FOR BUSINESS EXECUTION DURING THE FIRST THREE YEARS.

1. ON-THE-JOB TRAINING.

2. LECTURES AND SEMINARS GIVEN BY INSTRUCTORS FROM SUPPORTING SYSTEMS, 60 HOURS, 2-3 HOURS PER DAY FOR A MONTH.

3. CHECKING SYSTEM: CHECKING ON CHECKLIST AND ASSESSMENT TESTS; ALSO CHECKING AND EVALUATION AFTER LECTURES.

II. MANAGER TRAINING (3 DAYS OF INTENSIVE TRAINING)

A. UNDERSTANDING OF THE MANAGERS' ROLE, OF PERFORMANCE EVALUATION, HOW TO TRAIN, AND HOW TO DISCUSS AND COUNSEL WITH EMPLOYEES, ETC.

B. DEVELOPMENT OF PROBLEM-SOLVING CAPABILITIES (HARVARD-STYLE CASE METHOD).

C. DISCUSSIONS WITH THE COMPANY'S TOP MANAGEMENT PEOPLE.

TRAINING FOR SPECIAL PURPOSES

1. LANGUAGES (MITSUI HAS AN INTERNATIONAL LANGUAGE CENTER AND USES COMMERCIAL FIRMS FOR IMPARTING LANGUAGES TO CERTAIN GRADES OF OVERSEAS PERSONNEL.)

A. ENGLISH: VARIOUS COURSES ACCORDING TO NEEDS.

B. OTHERS: INTENSIVE LESSONS JUST BEFORE ASSIGNMENT OVERSEAS.

II. OVERSEAS TRAINING (FOR 25- TO 30-YEAR-OLD PERSONNEL)

A. A-TYPE FOR WHICH ANYONE CAN APPLY.

1. ONE TO TWO YEARS OF STUDY AT FOREIGN UNIVERSITIES, THEN ONE YEAR ON-THE-JOB TRAINING AT MITSUI OVERSEAS OFFICES.

2. SINCE 1952, OVER 550 TRAINEES HAVE BEEN SENT TO OVER 30 COUNTRIES.

3. TRAINING IS AREA-ORIENTED FOR FUTURE ASSIGNMENT IN THAT AREA: U.S., GREAT BRITAIN, ITALY, SPAIN, MEXICO, SOUTH AMERICA, RUSSIA.

B. B-TYPE FOR DIVISION MANAGER TO NOMINATE AND PERSONNEL DIVISION TO APPROVE.

1. ONE YEAR ON-THE-JOB TRAINING AT OVERSEAS OFFICES, OTHER COMPANIES AND INSTITUTIONS, OR OVERSEAS EXCHANGE SUCH AS WITH GENERAL ELECTRIC FOR ONE YEAR.

2. SINCE 1963, OVER 500 TRAINEES HAVE BEEN SENT.

3. COMMODITY TECHNOLOGY-ORIENTED TRAINING.

III. MANAGEMENT TRAINING (FOR MANAGERS)

A. BUSINESS SCHOOL.

1. MIT SLOAN FELLOW.

2. HARVARD (EITHER U.S. OR SWISS).

3. INSEAD (FRANCE).

B. MANAGEMENT SEMINAR.

CHART 3

3-YEAR DEVELOPMENT PROGRAM CHECKLIST FOR B-KYUUSHOKU STAFF*

This checklist covers fundamental items with which all young staff members are expected to be familiar. They were prepared as part of the new personnel system for developing human resources in 1973 and may be modified to suit local conditions.

Following are the titles of 22 groups of items:

1. Letter writing (10 items)
2. Typing in English
3. English telex messages (2 items)
4. English letters (3 items)
5. Economic papers, trade papers, and similar periodicals (3 items)
6. Conferences and discussion (16 items)
7. Negotiations (9 items)
8. Collecting information (3 items)
9. Filing (4 items)
10. Computer (4 items)
11. Company
12. Credit lines
13. Ringi system (able to prepare basic paper for 14 different transactions to be coordinated through the "ringi" system of decision making)
14. Contracts and agreements (18 items)
15. Accounting (16 items)
16. Trade (8 items)
17. Foreign exchange (12 items)
18. Insurance (11 items)
19. Delivery (44 items)
20. Payment settlement (42 items)
21. Business results (8 items)
22. About your business territory (9 items)

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*NOTE: This checklist was developed by the Training Team of the Personnel Division. At the end of the three-year development program, new staff members are expected to pass a test covering these items.

MITSUBISHI CORPORATION TRAINING AND EDUCATION:

A Continuous Learning System

The Mitsubishi Corporation is Japan's largest "sogo shosha,"[1] with annual trading transactions amounting to $70 billion and handling over 25,000 different categories of products. With its network of 200 offices throughout the world, it employs over 10,000 employees and 3,400 non-Japanese. It has subsidiaries and joint-venture projects in the United States, Canada, Honduras, Mexico, Brazil, Australia, United Kingdom, Germany, France, Greece, Africa, Asia, Indonesia, Malaysia, Hong Kong, Thailand, Singapore, and the Republic of Korea.

The most vital role is that of an international business organizer in oil exploration, mineral resources development, and industrial plant construction: participating in feasibility studies, planning, financing, material and machinery procurement, and product marketing. At present, there is a Mitsubishi company in each of the major Japanese industrial sections: manufacturing, banking, insurance, credit, transportation, warehousing, real estate, construction, research, coordination, and marketing.

Corporate management responsibilities emphasize the fulfillment of obligations as a corporate citizen, dedication to the augmenting of human resources, and the improvement of organizational structure. The heart of its management philosophy is Mitsubishi's three business goals: (1) corporate responsibility to society; (2) integrity and fairness; and (3) international understanding through trade. In its corporate annual

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[1] A sogo shosha is more than a commercial trading company; it is also a marketing, development, and organizing company.

report, Mitsubishi states: "In an era when changing economic conditions make the development of new functions and roles of paramount importance, personnel with creative talents, flexible thinking, and superior business capabilities have become a vital asset. Thus, the company makes continuing efforts to draw on the knowledge, talents, and experience of its staff while at the same time striving to develop these resources to their fullest."[2]

Organization

The Personnel Division is divided into two main sections that handle: (1) the personnel functions of recruitment, promotion, training, classification, career paths; and (2) fringe benefits, housing, welfare, and so on. The training function is part of the General Affairs and Personnel Department, the director of which is one of the twenty-member Board of Directors.

The responsibilities for training are divided between the training function within the Central Office of the personnel department and the managers of the operating divisions. Historically, each department has its own training program. Where a departmental program is useful for more than one department, the program is coordinated by the Central Office.

Managers do not feel that time invested in training is a loss. The Personnel Department keeps composite records of the Personnel Department History of each employee and sends back records of training to each department. Also, Personnel receives comments and feedback from the departments on training conducted by the Central Training office.

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[2]Mitsubishi Company, Annual Report 1981, page 6.

Personnel Systems

Recruitment. As is traditional in Japan, Mitsubishi Corporation recruits in April at the time of graduation from colleges and high schools. Last year, 199 male college graduates and 500 senior high school graduates were hired.

Promotion. Promotion is by seniority. The college graduate trainees become managers after 15 years of service whether they have subordinates or not.

Career path program. This is largely a rotation program and is closely linked with the training and development. The plan provides for three assignments during the first 15 years to either domestic, export, or import operations. Training is for both specialist and generalist skills. These 15 years of rotational assignments are mandatory, and the trainee receives the title of manager after that. Some managers have subordinates, and others do not. This is a "face-saving" way of recognizing the employee as he comes up through the ranks, yet promoting the solid talent to leadership positions.

Classification. They do not use job descriptions. Their classification system provides for flexibility in assignment and for generalized, rather than just specialized, training and learning assignments.

Training and Educational Program

Training programs are a part of a much larger concept of training/learning and development. In its broadest sense, training is one aspect of the fundamental policy that personnel development lies in the individual, self-oriented development of each employee with the ultimate goal of raising the quality of his job.

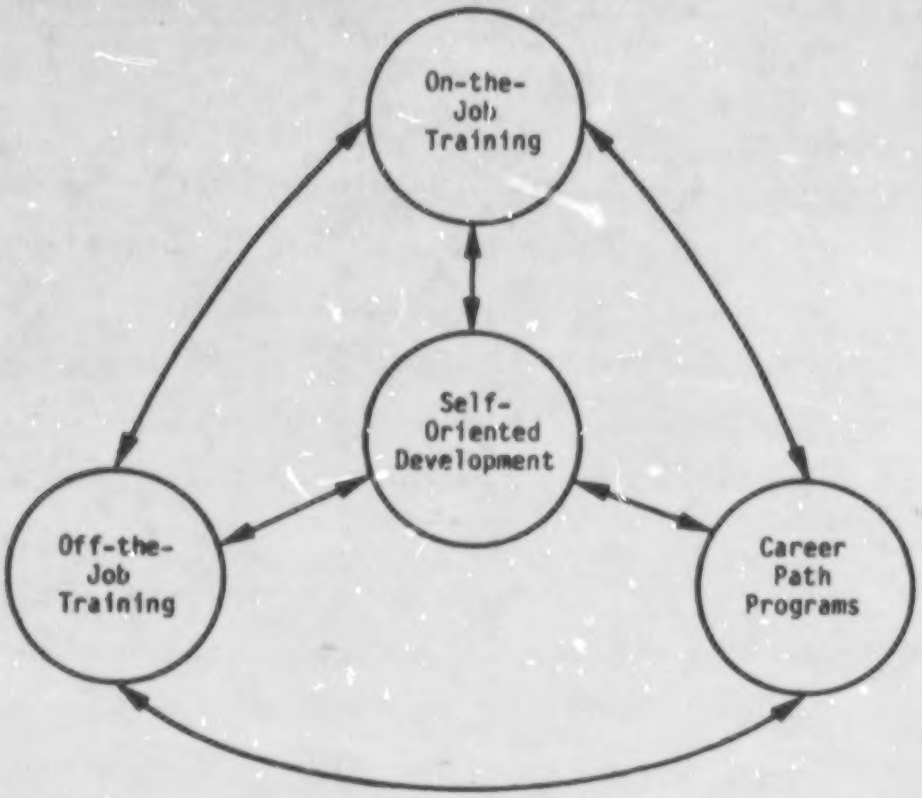

Figure 1: Training system of Mitsubishi Corporation.

Daily business operations, activities, and closely related on-the-job training are believed to be the most important means of developing one's ability; and job rotation provides a good stimulus for this development. Much depends upon the trainee's degree of self-motivation, but policy, programs, supporting personnel systems, frameworks of organizational structure, work systems and processes, and the ways managers manage are all favorable influences.

On-the-job training. What makes on-the-job training so effective? It provides each "freshman" with one person as instructor who works with the new recruit. This instructor is not the supervisor, but rather a tutor. Under this arrangement, a recruit is assigned as an assistant to a staff member who already has several years of professional experience and who has a specific task to perform in the company's business.

In this way, the younger employee can learn through observing, participating in actual transactions, and getting feedback assistance on his performance. Instructors are nominated by each department, and instructors are given training in the know-how of assisting the "freshmen." For example, in the course "Instruction for Instructors," specialists in the psychology of new recruits are used to help the tutors better understand effective processes for learning. This instructorship phase ends after the first six months, but the department continues on-the-job training thereafter through the managers and supervisors.

The central training division. This division provides six major types of training programs: training according to rank, training according to purpose, training outside Japan for internationalization, language training in Japan, manager refresher training, and business secretary training.

Training According to Rank

This training goes hand-in-hand with the career path provided for managers; actually, mandatory training is provided at each seniority level in the form of intra-company seminars. These seminars generally help to reinforce communication which tends to be weakened within a large organization. The lectures of these seminars are given mostly by people within the company, namely top management such as general managers and section managers. The participation of manager/employees in these seminars is planned shortly after their promotion to new rankings.

Following are the seminars in order of rank:

1. General Managers' Seminar
2. Managers' Seminar
3. Pre-management Seminar
4. Practical Skill-Building Seminar

5. Freshmen's Instructor Seminar

6. Freshmen's Training that includes:

   (a) Four-day orientation seminar

   (b) Basic knowledge about the company's work

   - business transactions: rules of business transactions and other standards, legal status, contract credit line, analysis of financial statements
   - accounting and administration: accounting systems, EDP systems, budget and settlement of accounts, business transactions, and taxation.
   - export and import transactions: practices of shipping, customs clearance, insurance, foreign exchange practices
   - others: telex, letter writing, typing

   (c) English training

   - business communications program
   - advanced business communications

   (d) Follow-up training

Training According to Purpose

Whereas training for rank is mandatory, and all costs are borne by the Mitsubishi Corporation, training according to purpose is either mandatory or voluntary, and the corporation pays anywhere from 50 to 100 percent.

Mandatory seminars are for:

- Domestic/overseas office chief assignees
- Overseas assignees
- Overseas assignees' families
- Overseas investment projects
- Auditors

Voluntary seminars are for:

- Domestic affiliates and subsidiaries
- EDP for managers
- Management analysis
- Contract and legal matters
- Mitsubishi Corporation international managers
- Mitsubishi Corporation international general
- Long-term business training for overseas office personnel in Japan.

Training Outside Japan for Internationalization

The corporation sends selected employees for intensive study in business administration and corporation management to such schools as Harvard and Stanford Universities. It also assigns personnel to various countries for two or three years in order to acquire language skills and international experience.

Following are the training opportunities:

- Middle management business school training (AMP, SMP, MIT/SF)
- Business school training (MBA at Harvard, Stanford, Wharton, etc.)
- Law school training
- Overseas language training
- Institute for International Studies and Training (27 weeks in Japan and 4 weeks overseas).

Language Training in Japan (all voluntary)

- English
  - Freshman English course
  - Business English conversation course
  - Business English writing course
  - Cross-cultural communication in English course
  - English testing program

- Chinese language course
- Pre-overseas transfer language training

Managers' Refresher Training (all voluntary)

- Japan Productivity Center's course for management consultants
- Seminar for management consultants of small- and medium-sized enterprises
- Seminar of management analysis
- Finance administration training
- Refresher schooling for managers
- Seminar for labor management specialist
- Seminar for social security administration

Business Secretary Training (mandatory)

- Seminar for senior business secretaries
- Seminar for junior business secretaries
- Training for newly enrolled business secretaries
- Culture program
- Business secretary instructors' training.

In conclusion, the Mitsubishi Corporation feels its investment in training and development provides financial returns, since the growth and learning of its employees brings more effectiveness in productivity, quality, and teamwork. It bases its personnel development program on the self-oriented development by each employee with the ultimate goal of raising the quality of his job. Thus, the effectiveness of Mitsubishi's training depends largely on the trainee's degree of self-motivation. It is believed that daily business operations and on-the-job training are the most important means toward developing one's ability. Job rotation also provides

a good stimulus for the employee. Such self-development is supplemented by various other training programs.

Other programs and arrangements reinforce such growth and development:

- The "open office" is used in which 100-125 employees work together in a very large office with their manager and assistant manager. Thus, the employee has ready access to his supervisors for questions and assistance. Management is right there to help and assist.

- The assignment of employees to jobs is very flexible and can provide much opportunity for learning and growth.

- The use of sempai-kohai or the "big brother" system, wherein the trainee selects one or more peers to advise and counsel him during his period of development, brings about teamwork.

- The use of individual tutors provides a man-to-man kind of assistance in the earlier period (first six months) of a trainee's experience.

- The integration of mandatory training, with promotion through the ranks, to link what each new rank requires with the needed off-the-job training and seminars.

- The use of Quality Control Circles brings groups together and sparks learning as they discuss needs for change, improvements, and innovative methods.

- The insistence on generalist training through 4-5 years of rotation brings about broad insights into the entire operation of Mitsubishi Corporation and helps managers to manage intelligently as well as to coordinate with those who need such coordination.

- The process of decision making is a learning experience. There is much discussion provided for a proposal (ukaigi). The plan is circulated among those concerned, and everyone whom it will affect, both vertically and horizontally, has an opportunity to review it. There is a covering letter with space provided for a "seal" or an "okay," so to speak. Before the paper is circulated, there are opportunities for talking and consulting (called "nemawashi" or root binding). Sometimes those involved discuss the matter on their private time in order to better exchange opinions. By the time the paper is finally in the hands of the manager, everyone has had an opportunity to be involved, and when the manager implements the proposal, everything goes smoothly.

TRAINING AND EDUCATION AT MITSUBISHI HEAVY INDUSTRIES:

A Continuous Learning System

Mitsubishi Heavy Industries, Ltd., an international corporation noted for its use of advanced technologies in the world, has many diverse business operations: production and sale of shipbuilding and steel structures, power systems, chemical plants, aircraft and special vehicles, environmental control equipment, industrial construction and precision machinery, engines, and refrigeration and air-conditioning systems. Its subsidiaries are engaged in the production and sale of automobiles and agricultural machinery. Other business lines include shipbuilding and steel structures, power systems, chemical plants, engineering, construction machinery, aircraft, and automobiles. In addition to its domestic network, it has an overseas network with thirty-four offices all over the world.

Mitsubishi's management policy acknowledges its dependency upon human resources. The total number of employees was 95,300 as of March, 1980. Mitsubishi Heavy Industries actively pursues a policy of self-actualization through in-company training in order to develop the individual's abilities to the fullest possible extent and to ensure that the "right man is in the right place."

Basic Policy of Education and Training

The following are quoted from a Mitsubishi Heavy Industries' policy statement:[1]

> "Because growth and development of enterprise eventually depend upon the quality of employees, as it is often

[1]Mitsubishi Heavy Industries, Ltd., Basic Policy of Education and Training.

said that people determine the fate of an enterprise, education and training is provided systematically and continuously according to the group of employees, based on the long-range view that education and training is an integrated part of company operation and personnel management. Self-development is the basic approach to developing the employee's capability to perform his job."

"Development of the employee's capability to perform his job so largely depends on the daily coaching by managers or supervisors, that the basic approach shall be education or training provided by managers or supervisors on subordinates' daily jobs (which is called 'on-the-job training')."

"In order to supplement on-the-job training, off-the-job training shall be provided, the contents of which are centered around the common and basic items required in each job group or position.

"If any education or training is provided, needs shall be clearly pinpointed, and definite objectives shall be determined before timely education or training is provided for the hours necessary by the most efficient methods."

Organization

From an organizational standpoint, training, education, and development are part of a Department of General Affairs, Labor, and Personnel, which is headed by one of the ten managing directors. Personnel and training have high status in this organization. Responsibilities for training and development are shared by the Head Office, Personnel Department, managers, supervisors, and by in-the-field plant training and development departments.

Personnel System

Mitsubishi's personnel systems motivate employees to learn and to be productive. In fact, they lay a foundation for the learning, growth, and development of their employees.

Recruitment and placement. The two major sources of new personnel are the college graduate and the high school graduate. There are two

major categories into which these newcomers are placed, but actually three career paths: one category is the Clerical and Engineering Group, and the other is the Production Work Group. In the Clerical and Engineering Group or category, there are two career paths: one for the college graduate, and the other for the high school graduate. The third career path is for the Production Work Group category.

White- and blue-collar paths. As can be seen on the following page in Figure 1: Education and Training Framework, the career path of the blue-collar worker can lead to promotion into positions traditionally held by the white-collar (see also Figure 2: Foreman Development Program on page 81). To prepare the blue-collar, foreman, supervisory, and management personnel, Mitsubishi courses provide training that leads to middle, advanced, and executive management training as well as to those positions. Also, it should be noted that, on the basis of equal status, blue-collar workers live in the same housing as white-collar workers, and foremen belong to the union.

Job classification. Although they do have job descriptions, there are no limitations to what the employee can do nor on what the manager may assign to a worker. In fact, managers want to see what their workers can do through varying work assignments and are concerned about developing workers. Managers are the coaches of employees and suggest that they participate in training and education activities after reviewing the list of courses prepared by the training staff. As one member of the Personnel Department said, "Managers should prepare and train their employees. It's a number one duty."

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FIGURE 1

MITSUBISHI HEAVY INDUSTRIES' EDUCATION AND TRAINING FRAMEWORK:

Self-Development and On-the-Job Training

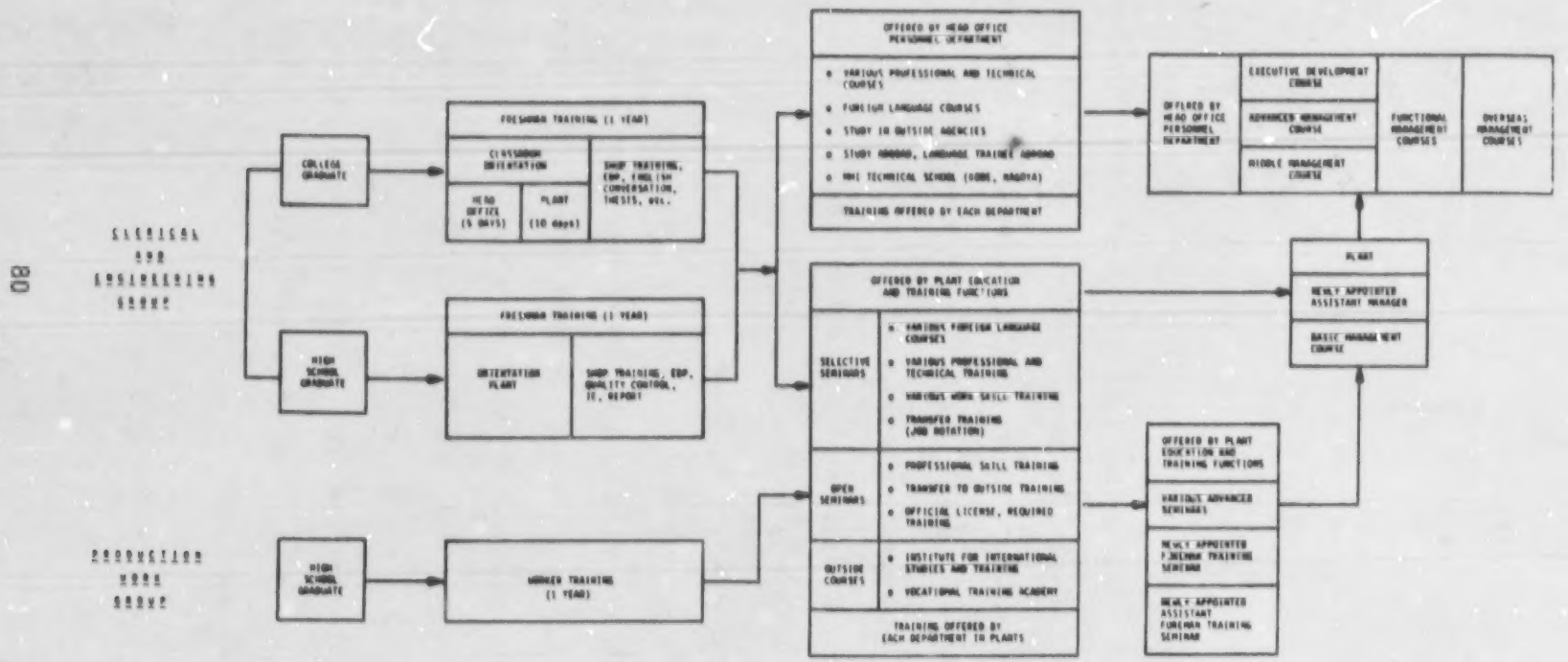
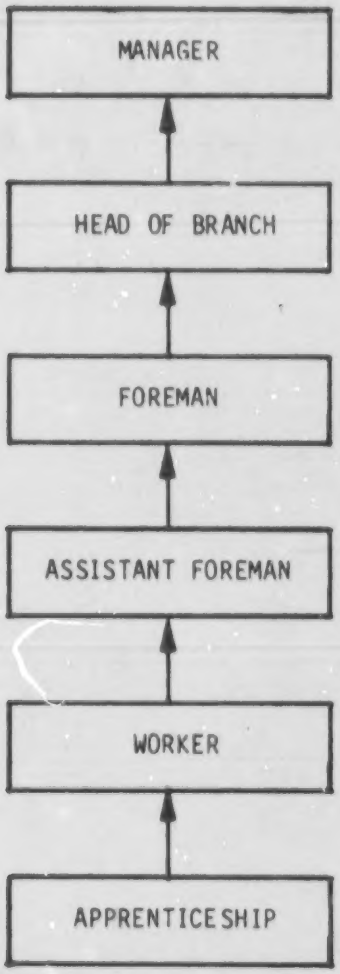

CLERICAL AND ENGINEERING GROUP
PRODUCTION WORK GROUP
COLLEGE GRADUATE
HIGH SCHOOL GRADUATE
HIGH SCHOOL GRADUATE
FRESHMAN TRAINING (1 YEAR)
CLASSROOM ORIENTATION
HEAD OFFICE (5 DAYS)
PLANT (10 days)
SHOP TRAINING, EDP, ENGLISH CONVERSATION, THESIS, etc.
FRESHMAN TRAINING (1 YEAR)
ORIENTATION PLANT
SHOP TRAINING, EDP, QUALITY CONTROL, IE, REPORT
WORKER TRAINING (1 YEAR)
OFFERED BY HEAD OFFICE PERSONNEL DEPARTMENT
VARIOUS PROFESSIONAL AND TECHNICAL COURSES
FOREIGN LANGUAGE COURSES
STUDY IN OUTSIDE AGENCIES
STUDY ABROAD, LANGUAGE TRAINEE ABROAD
MHI TECHNICAL SCHOOL (OBU, NAGOYA)
TRAINING OFFERED BY EACH DEPARTMENT
OFFERED BY PLANT EDUCATION AND TRAINING FUNCTIONS
SELECTIVE SEMINARS
VARIOUS FOREIGN LANGUAGE COURSES
VARIOUS PROFESSIONAL AND TECHNICAL TRAINING
VARIOUS WORK SKILL TRAINING
TRANSFER TRAINING (JOB ROTATION)
OPEN SEMINARS
PROFESSIONAL SKILL TRAINING
TRANSFER TO OUTSIDE TRAINING
OFFICIAL LICENSE, REQUIRED TRAINING
OUTSIDE COURSES
INSTITUTE FOR INTERNATIONAL STUDIES AND TRAINING
VOCATIONAL TRAINING ACADEMY
TRAINING OFFERED BY EACH DEPARTMENT TO PLANTS
OFFERED BY HEAD OFFICE PERSONNEL DEPARTMENT
EXECUTIVE DEVELOPMENT COURSE
ADVANCED MANAGEMENT COURSE
MIDDLE MANAGEMENT COURSE
FUNCTIONAL MANAGEMENT COURSES
OVERSEAS MANAGEMENT COURSES
PLANT
NEWLY APPOINTED ASSISTANT MANAGER
BASIC MANAGEMENT COURSE
OFFERED BY PLANT EDUCATION AND TRAINING FUNCTIONS
VARIOUS ADVANCED SEMINARS
NEWLY APPOINTED FOREMAN TRAINING SEMINAR
NEWLY APPOINTED ASSISTANT FOREMAN TRAINING SEMINAR
CLERICAL AND ENGINEERING GROUP
SUPERVISORY GROUP
MANAGEMENT GROUP SPECIALIST STAFF GROUP

FIGURE 2

FOREMAN DEVELOPMENT PROGRAM



The emphasis is on generalized knowledge and skills. Although it is realized that specialization has its value, they believe that the advantages of generalization outweigh those of specialization. Managers who have had work experience in many different aspects of their company's operations are better prepared to coordinate work with other departments and to participate in teamwork. The essence of management, they believe, is teamwork.

Evaluation of performance. Evaluations of employee performance are made by supervisors and discussed with employees. In addition to feedback given to workers, records are kept in the personnel office. The records include job history, licenses, language ability, educational history, in-house training completed, hobbies, family, and where employees were raised.

In addition, there is a self-development plan prepared by all managers which includes the following:

- Write down your present job, what you are doing.
- Review your last year's effort.
- What was its focus, and were you satisfied?
- What do you think about your present job? Is it heavy? Good? Do you wish to do something else?
- What are your objectives? What is your focus for next year? What do you want to develop by yourself? What do you want to accomplish? Do you want to work overseas? In Japan? Where, and in what kind of job?

There also is space allowed for whatever the manager wishes to say.

Labor relations. Union and management processes bring about good relationships between management and the workers. For example, their informal process to bring about a work change, such as the introduction of robots, would follow these steps:

1. Management gets a working group together with union officials, staff from personnel, the foremen affected in the shop, and possibly representatives from accounting and engineering.

2. After the entire situation has been discussed and thoroughly understood, then a more formal process enables all managers to agree.

3. During the discussions, agreement from the union officials is obtained, and an understanding is reached on the benefits of relocating excess workers.

4. The proposal is explained to the manager of the plant and then implemented.

5. All vital information is shared with the unions. There are many informal meetings before complete understanding and agreement is reached.

Training and Education System

The Mitsubishi Education and Training Framework (Figure 1) shows the general plan for the continuous training and development of Mitsubishi workers. As can be seen, much of the learning is integrated with experience gained by placement following a career path plan. Supplementing this are company-sponsored courses that are offered by the Central Personnel Department, various other departments, and by Plant Education and Training functions. Heavy emphasis is placed on self-development, and assistance is given to employees in their study courses. Rotation provides a variety of on-the-job learning experiences. After their freshmen training, college graduates spend three years and four months in the Head Office before moving to the plants and the different divisions. Some of the divisions have their own rotation career systems that provide planned experience in sales, finance, and accounting in order to prepare coordinators to become division managers.

Coaching is vital to their training and development processes:

- Every manager is expected to be a coach, to bring along his workers through on-the-job training, and to suggest certain supplementary courses that the employee can take.
- Also there is the tutor system, where the newcomer receives a tutor on a man-to-man basis for one year.
- In the traditional manner, sempai-kohai enables an employee to pick his own sempai. This is known as the brother (or mentor) system when applied to workers. It is a broad relationship that helps a new employee (particularly when he might have a supervisor or manager who is not an effective counselor).

In summary, then, Mitsubishi makes use of a wide variety of training practices: classes, on-the-job training, trainee (apprenticeships), coaching, tutors, rotation, sempai-kohai, and self-development.

As in most Japanese firms, Mitsubishi uses the small-group process as a learning method. For example, the Quality Control Circles provide for volunteer participation by workers in the improvement of work methods and in the solution of work problems. Also, the decision-making process provides for the participation of all who are involved in the process or situation requiring a decision. This is a continuing means of education and learning.

Self-development is the basic approach to developing the employee's capability to perform his job. Each manager is a coach of his subordinates. Managers discuss and recommend course opportunities with their employees and make the arrangements for them. As mentioned earlier, self-development plans are prepared by managers.

Training and Development Courses

Mitsubishi Heavy Industries' training and development courses are closely coordinated with the career paths outlined in the Mitsubishi

Heavy Industries' Education and Training Framework (as shown in Figures 1 and 2).

The system of education and training is outlined on the following page in Figure 3, and the contents of management courses (listed in Figure 3) are outlined in Table 1 on page 87. The Apprenticeship Training and Foreman Development Programs are presented in Table 2 on page 88.

FIGURE 3

SYSTEM OF EDUCATION AND TRAINING FRAMEWORK

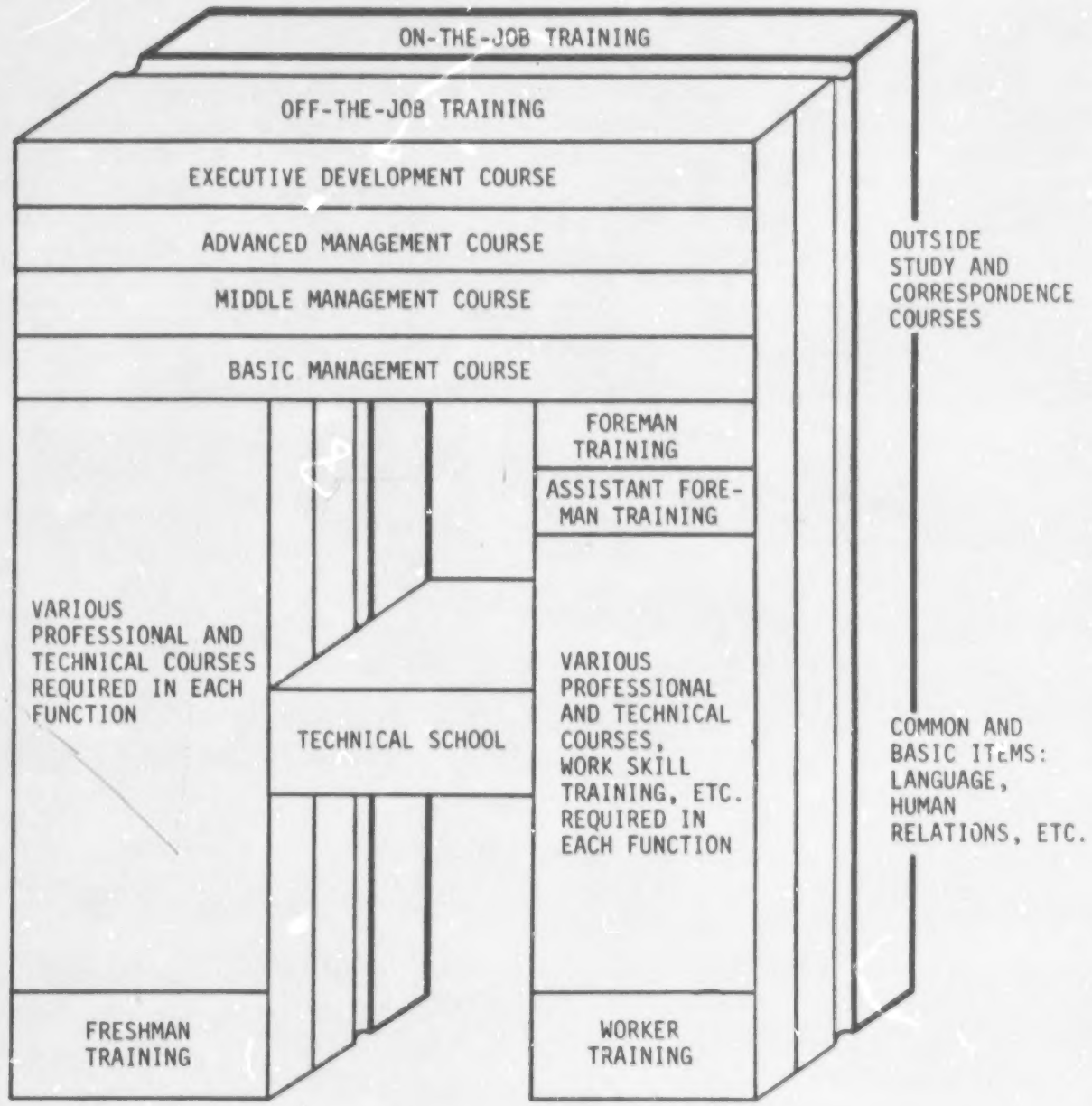

ON-THE-JOB TRAINING
OFF-THE-JOB TRAINING
EXECUTIVE DEVELOPMENT COURSE
ADVANCED MANAGEMENT COURSE
MIDDLE MANAGEMENT COURSE
BASIC MANAGEMENT COURSE
OUTSIDE STUDY AND CORRESPONDENCE COURSES
FOREMAN TRAINING
ASSISTANT FOREMAN TRAINING
VARIOUS PROFESSIONAL AND TECHNICAL COURSES REQUIRED IN EACH FUNCTION
TECHNICAL SCHOOL
VARIOUS PROFESSIONAL AND TECHNICAL COURSES, WORK SKILL TRAINING, ETC. REQUIRED IN EACH FUNCTION
COMMON AND BASIC ITEMS: LANGUAGE, HUMAN RELATIONS, ETC.
FRESHMAN TRAINING
WORKER TRAINING
CLERICAL AND ENGINEERING GROUP
PRODUCTION WORK GROUP

TABLE 1

CONTENTS OF MITSUBISHI HEAVY INDUSTRIES' MANAGEMENT COURSES*

EXECUTIVE DEVELOPMENT COURSE	HOURS	ADVANCED MANAGEMENT COURSE	HOURS	MIDDLE MANAGEMENT COURSE	HOURS	BASIC MANAGEMENT COURSE	HOURS
Management Problems in MHI	3	Function and Responsibility of Department Managers	3	Function and Responsibility of Middle Managers	4	Function and Responsibility of Assistant Managers	4
Associated Companies Management	3	Management Creed and Policy of MHI	3	Management Creed and Policy of MHI	3	Management Creed and Policy of MHI	3
Management Strategy	20	Management of Technology in MHI	3	Finance and Accounting System of MHI	6	Concept of Management	8
Special Lecture	3	Economic Problems of Japan	3	Planned Reading	6	Coaching and Merit Rating	8
Meeting with Top Management	3	Social Problems of Japan	3	Free Discussion	6	Finance and Accounting System of MHI	6
Free Discussion	9	Problems of International Relations	3	Management Strategy	3	Safety Management	2
Economic Problems of Japan	3	Management Strategy	12	Problem-Solving Methods	8	Problem-Solving Methods	8
Problems of International Relations	3	Planned Reading	6	Meeting with Top Management	3	Meeting with Plant Managers	2
		Free Discussion	12			Free Discussion	6
		Meeting with Top Management	3				
		Special Lecture	2				
TOTAL HOURS	47		53		39		47

*Training courses are held in camps in MHI Management Development Center at the foot of Mt. Fuji.

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TABLE 2

MITSUBISHI HEAVY INDUSTRIES' APPRENTICESHIP TRAINING AND FOREMAN DEVELOPMENT PROGRAMS

APPRENTICESHIP TRAINING PROGRAM*		FOREMAN DEVELOPMENT PROGRAM		ASSISTANT FOREMAN PROGRAM	
	HOURS		HOURS		HOURS
Vocational Ethics	45	Foreman Function and Responsibility	4	Function and Responsibility	2
Mathematics	45	Company Policy	3	Company Policy and Situation	2
English	45	Production Control	6	Shop Regulation and Management	4
Gymnastics	22	Progress of Work Control	6	Human Relations	6
Production Engineering	45	Quality Control	6	Job Methods (TWI)	6
Materials	45	Cost Control	6	Work Study	6
Applied Dynamics	20	Shop Regulation and Management	6	Safety Management	4
Drawing	90	Coaching and Merit Rating	10	Creative Thinking Methods	6
Machining Methods (Ship Engineering)	90	Safety Management	4	Line and Staff Relationships	2
Other Engineering Units	131	Leadership	4	Labor Relations	2
Basic Practices	567	Computer Concepts	14	Meeting with Managers	2
Applied Practices	700	Writing and Reporting	6		
		Labor Relations	5		
		Meeting with Managers	2		
TOTAL HOURS	1890		80		42

*Given to senior high school graduates for one year.

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LEARNING AT SEIKO:

A Continuous Training and Education System

The Seiko group of companies works under an integrated and cooperative system from the manufacture of machine tools to the machining and assembly of watch parts. Within the group, Daini Seikosha plays a key role in its position as the main manufacturing company and the mainstay of this group of sister companies (see the following page for a listing of member companies and their functions). Daini Seikosha has acquired a reputation for its outstanding technology second to none throughout the world. Although best known for watch production, it is now recognized for its production of the D-scan automatic drafting systems (that realize high-speed designing in architecture, automobiles, and electronic components), for analytical instruments that measure the density and thickness of rubber, and for many other integrated, precision instruments and electronics products.

According to Mr. Reijiro Hattori, Executive Vice-President of Seiko K. Hattori and Company, training and development was a key to the building of the Seiko family group of many companies. During the post-war years, the challenge to Japan was to convert from the small shop to the large factory and company and to mobilize the small shop owners. This transition was greatly reinforced by the use of short-term training in new skills and also by helping the independent shop owners to learn how to work in companies and to be useful in large organizations. Mr. Hattori says that his experience in the building of the Seiko group has shown him that employees place a high value on learning new things and like to be trained to become capable, well-respected "Seiko men." The Daini Seikosha

THE SEIKO GROUP

Suwa Seikosha Company, Ltd. - Manufacture of watches.

Daini Seikosha Company, Ltd. - Main manufacturing company.

K. Hattori and Company, Ltd. - Sales.

Seikosha Company, Ltd. - Manufacture of clocks.

Kameido Factory - Watch (assembly), electronic and scientific instruments.

Ohno Factory - Pinions, gears, screws, balance dies, tools.

Takatsuka Factory - Base plates, bridges, LC Panels, LSI, inspection of watches.

Oyama Factory - Fluorescent X-ray film, thickness gauges, atomic absorption spectrophotometers, thermal analysis systems, musical products.

Narashino Factory - Automated drafting systems, digitizers, graphic displays.

Sukagewa Seiko Company

Arakawa Kako Company - Plating.

Sendai Seimitsu Zairyo Kenkyusho Company - Mainsprings, hairsprings, batteries, rotor magnets, coil blocks, mechanical filters, precision springs.

Tochigi Koseki Company - Jewels, quartz oscillators, circuit blocks, machining of hard and brittle metals.

Seiko Keiyo Kogyo Company - Substrates, rotor (oscillating weight) levers, springs, gears.

Seiko Seiki Company - Precision machine tools, grinder and special-purpose machine compressors for car coolers.

Morioka Seiko Kogya Company - Watches, screws, pin LC panels, date dials, day stars, plastics.

Nippon Precision Circuits Company - IC, LSI.

Seiko Instruments - (Torrance, California) Repair of watches.

Singapore Time PTE - Watches (vertically integrated production).

Precision Engineering - (Hong Kong) assembly and casing of watches.

Company places high emphasis on commitment to its people, of which there are nearly 10,000.

The management philosophy rests upon their aim to give employees a feeling of belonging. Through its managers, the company is concerned with the emplcyees' families, marriages, deaths, and personal problems.

Organization of Training

The training and education function is part of the Personnel Department. The training staff numbers twenty-four at the Seiko Training Center, of which eight work on orientation and induction for newcomers to the Seiko companies. The remaining sixteen are concerned with training for the technical aspects of watchmaking, precision instruments, and with programs for management development. The Seiko Training Center selects, as members of its staff and as its instructors, workers who are several years older than the newcomers whom they train as group leaders and as instructors. Also, much of the development of employees rests upon the shoulders of each manager. The Training Center has developed both a course and an accompanying manual for supervisors and managers to help them learn how to train and develop their employees.

In September, the Seiko Training Center staff prepares a training plan for the coming year. Also, the training manager prepares a report which is discussed at a general meeting of top managers. The training report covers items such as: a description of the people who have been trained during the past year, in what they have been trained, the achievements of the various learning experiences (such as group experiences at a retreat), Quality Control Circles, on-the-job training at the factories, and comments of those participating in the training and development programs on what they have learned and what they consider to be successful programs.

Personnel Systems

Recruitment. Seiko recruits primarily from university and high school graduates in April. In 1981, 265 were recruited, and the target for 1982 is 325.

Placement and promotion. The system is based on integrated lifetime employment and continuous training. First assignments are rotational to marketing, merchandising, research, instruction, and other functions. Although there is some specialization at the early stages, the training aims at generalization so that the trainee/manager can deal with all functions when he gets to the branch manager level. Performance is watched as one of the bases for promotion, and strong producers are the ones selected. At the lower levels, the general manager approves the selections for promotion, but an assignment to a post such as the general manager of the London or New York branch requires higher approval.

Salaries. There are 50 levels of salaries. The entrance level differs according to education. For example, the high school graduate enters at Level 1, while the university graduate enters at Level 4. The master's degree graduate enters at Level 6.

Labor relations. There is a strong effort to keep close to the company union. Meetings between management and the union are scheduled often. Special conferences are scheduled when needed. Gradually the gap between blue- and white-collar workers has closed. This helps them to work more closely together.

Continuous Training

Seiko maintains three kinds of training: on-the-job, in-house, and outside training and education. Seiko has high concern for the development of their managers, feeling that in the immediate post-war period managers

learned in the midst of chaos. Now they are preparing for the next generation of managers in a more orderly fashion. Essentially (in their words), "Japanese management specializes in improvement." Value engineering and work design are considered very important.

Training for the newcomer. There is strong and thorough emphasis on orientation and induction for the newcomer during the first year. Newcomers experience a combination of on- and off-the-job training. Both Seiko personnel that have been qualified to teach and professionally qualified instructors from the outside are used.

The orientation for newcomers is scheduled throughout the first year. Three aspects will be described in more detail.

The Initial Orientation

The first three months of the orientation program include entrance ceremonies, lectures, seminars, planned days (with 5-minute morning and afternoon exercise breaks and meditation periods), and daily "Question-and-Answer" sessions. Provision also is made for weekly reviews or tests of what the newcomer has learned as well as feedback to the firm on the newcomers' reactions to the orientation program. The main purpose is to help the newcomer realize that he or she is no longer a student but has joined a firm, to give him or her a sense of belonging, and to help the newcomer learn to be a Seiko employee. A copy of the first five days' schedule is included in on the following page in Table 1: Orientation and Induction Programs for Newcomers (university graduates). A different version of the orientation program is planned for high school graduates and women. There also is a different program designed for the technical, electronic, and work-design newcomer, particularly those with their master's degrees from a graduate school.

TABLE 1

SEIKO ORIENTATION AND INDUCTION PROGRAM
FOR UNIVERSITY GRADUATE NEWCOMERS

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	8:00	9:00	5-MINUTE EXERCISES	10:00	11:00	12:00	LUNCH	13:00	14:00	5-MINUTE EXERCISES	15:00	16:00	5-MINUTE MEDITATION	16:45
1ST DAY	ENTRANCE CEREMONIES, MANAGEMENT SPEAKERS			COMPANY ORIENTATION, HOUSING, MEALS, BENEFITS, SUPPORT				FACTORY			INTRODUCTION TO EACH DEPARTMENT			15 MINUTES QUESTIONS AND ANSWERS
2ND DAY	LECTURES, GENERAL MANAGER	SEMINAR ON COMPANY HISTORY		SEMINAR ON COMPANY ORGANIZATION	SISTER COMPANY PRODUCTS			GENERAL PICTURE OF WATCH PRODUCTION			LEARNING ABOUT RULES OF THE COMPANY			
3RD DAY	SALARY INFOR-MATION	SENIOR EXECUTIVE ON THE PRODUCTION STORY		DIRECTOR OF PERSONNEL ON LABOR RELATIONS, THE COMPANY UNION, SECURITY, SAFETY, HYGIENE				OUTSIDE PROFESSIONAL SPEAKER			QUALITY CONTROL CIRCLES	EXPLANATION OF SEIKO PRODUCTS		
4TH DAY	WELFARE	PRESIDENT SPEAKS ON MANAGEMENT POLICY		"HOW TO MAKE REPORTS" SESSION WITH INSTRUCTION BY AUDIO-VISUAL SLIDES AND PRACTICE				ENTIRE GROUP MEETING IN GYMNASIUM ON HELPS IN PRODUC-TIVITY "WAKE-UP" EXERCISES			HOW TO MAKE PHONE CALLS, HOW TO BE BUSINESSLIKE			
5TH DAY	TESTS	FEEDBACK FROM NEWCOMERS		FORM MADE FOR PERSONNEL	PERSONNEL DEVELOPMENT, HOW TO KNOW SELF, TO BE OUTGOING, HAVE GOOD MANNERS, "SEIKO MAN"			FIRST EXPERIENCE IN FACTORY	ORIENTATION TO TEAMWORK		LONG SESSIONS ON QUESTIONS AND ANSWERS			

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The Retreat Experience at the Seiko Camp

The 265 newcomers are divided into four groups that vary in number from 64 to 68 each. Eight coaches are assigned to each group. The main purposes of the camp experience are to learn about teamwork, to exercise the body and mind, to learn manners, and to promote better communication and relationships. One of the principal activities is the "Walking Rally." This exercise breaks the groups into pairs, giving a map to one of the pair and suggesting that the other watch for checkpoints on the course map. A walking speed is indicated by the starter (or "checker") at the starting point and at each checkpoint. Participants attempt to follow this specified speed. Differences between the desired time consumption between each point and what each player/team actually consumes results in demerits or credits. The winners are the pair whose demerit point-score is the smallest.

After the rally, in the evening and after dinner, the participants discuss the rally and how it was won or lost. Also, a discussion is held prior to the second Walking Rally on how to apply the lessons that participants learned from the first effort. The second rally is more difficult. After its completion, and the dinner of that evening, another discussion is held by the participants.

The September Follow-Up

A follow-up session is held in September to further emphasize points brought out in the first phase of the orientation. It includes more sessions on the sister factories, human relations, the realization of the self, what makes attractive personalities, the importance of attitude, and the importance of learning to be an attractive person. The aim of

their own development program and the meaning of competition are discussed. The use of sempai-kohai (selection of peers as counselors) also is discussed.

The orientation and induction program for the technical electronic and work-design newcomer includes two months of orientation along general lines and two more months at a later date on design circuits and microcomputers. Afterward, the newcomer is assigned to the System Manager of the Technical Department. There is a follow-up seminar for this group in September.

Training Other Than Orientation

Thus far, heavy emphasis has been placed on the Seiko plan and programs for the orientation of the newcomer. However, there are other elements of their training program such as the use of on-the-job training as the backbone of all individual development and growth. To help the supervisor and manager become proficient in backing-up the learning of the employee as well as the newcomer, a seminar has been designed and is given regularly for managers and supervisors on how to train and develop their people.

TRAINING AND EDUCATION AT THE OKI ELECTRIC COMPANY, LTD.:

A Continuous Learning System

The Oki Electric Company, with its headquarters in Tokyo, has branches worldwide. In the United States, Oki is located in New Jersey, Florida, and Santa Clara, California. It manufactures telephone exchange equipment, computers, peripheral equipment, digital equipment, small earth stations, electronic components, and semi-conductors.

Management's philosophy of human resource utilization embraces three important objectives: (1) to optimize human resources through cooperative strategies; (2) to achieve harmony between the personnel and training and education departments and the managers of the organization; and (3) to assign personnel to work according to capability. The foundation of their human resources philosophy can best be described by the company's guiding principle: "The enterprise is people." It is believed that the development of an enterprise is ultimately decided by the will and ability of each and every employee who works for the company. Oki Electric feels the reason their company has overcome great difficulties is because of their support of this ideology, "the enterprise is people," and by working hard to develop and utilize the talents of its people.

Oki's management is highly concerned with economic, social, and cultural changes that affect the growth and development of its employees. Through collection and analysis of data on the work force, Oki's Human Resources Development Department provides management with significant information with which to plan for training and education.

Organization

Responsibility for the development of Oki's work force is shared by line managers, the personnel division, and the training and education staff. As section chiefs, managers/supervisors are responsibile for achieving the company's organizational purpose, for getting the company's work done through its people, and for cultivating and utilizing people's talent for this purpose. In order to ensure the growth and development of the business, managers/supervisors must assure the education of talent for successive generations. As the manager/supervisor executes more complex and difficult tasks, he must always prepare his subordinates to assume his present responsibilities. Oki emphasizes that the "center of education is the head of the business"; and that, down the line, "we must all be educators." Managers and supervisors feel they must guard against giving too much importance to the educator, to the specialist, or to specialized education based on written texts.

Assistance to line management is given by the Human Resources Development Department. The manager of this department has prepared a manual for managers that alerts them to the significance of employee training and development and describes the conditions which indicate a need to change an employee's educational program. Following are ideas from this manual:

- On-the-job training, based on the daily work of managers and supervisors, is at the core of talent cultivation.
- Individualized education and on-the-job training according to needs are becoming more important than ever.
- One cannot expect great results from employee education unless, on the one hand, it motivates self-esteem in the individual and, on the other, it is well-planned and maintained.

In addition to evaluation of the gaps between an individual's ability and his job, Oki managers believe it is important to consider the tasks and job experience required to achieve "concrete educational program plans." The manual urges managers/supervisors to work daily with the development of subordinates, recognizing it is one of their main responsibilities.

The Human Resources Manager also collects and reports on data about the work force and the factors that affect it. Mr. Amaya, Oki's Human Resources Manager, is a member of the Committee of the Japanese Ministry of Labor concerned with changes and trends in Japanese manpower. Following is a summary of environmental changes and trends in work-force values now being evaluated by top management:

- An increase in Japan's economic problems.
- The changes in Japan's industrial structure.
- The increase of elderly workers, especially when provision must be made for the comparative learning abilities of the young and old. The increase of older workers is having an impact on lifetime employment and, thus, on lifelong continuing education systems.
- A more highly educated work force requires adjustments in the kind and quality of the training and education provided.
- Changes in value systems with regard to work and leisure. People do not wish to work as hard nor are they as interested in moving to rural areas. Although data shows the Japanese people remain work-oriented, it also shows that their interest in home and leisure activities has increased.
- Technological change, including the use of robots, is shifting the nature of work from mechanical to technical tasks. There is a strong need for job change training as blue-collar work lessens. Also, human resources development data describe the ten jobs with the greatest increase and the ten jobs showing the greatest decrease. These data help to plan the training needed to relocate workers affected by a decline in their occupations.

- There is an increase of female workers. Housewives increasingly enter the job market and bring about the need to develop training programs appropriate to them.
- Increased trading with developing countries requires companies to train workers from various cultures in ways of accomplishing harmonious cooperation.
- Labor union demands stimulate companies to train union leaders in business management skills. Unions also are establishing special organizations to train newcomers to the company.
- When building plants overseas and hiring local workers, Japanese companies now need to develop training for foreign workers and for sales and production managers.

Training and Education Programs

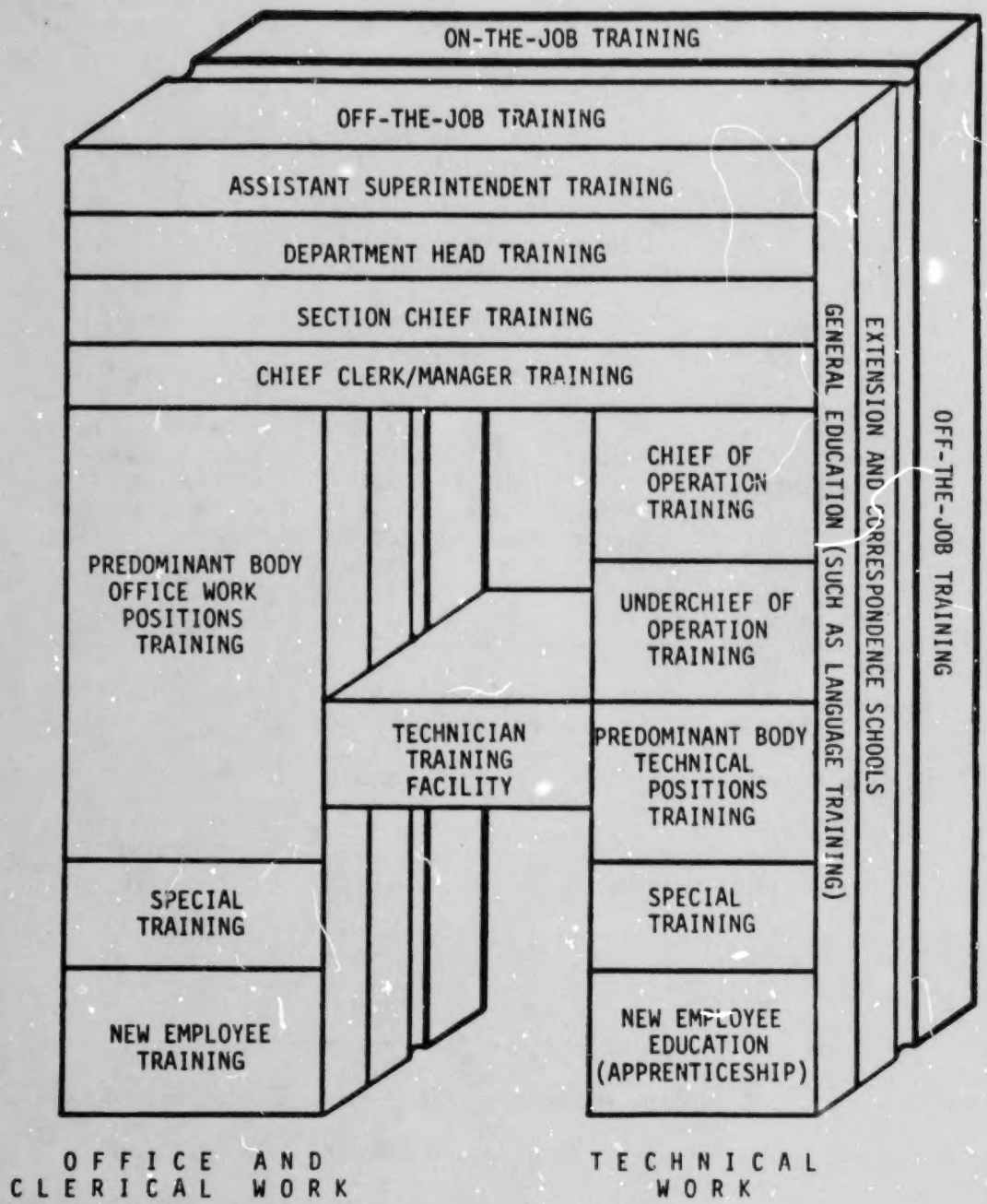
The fundamentals of Oki's training and development programs are continuing self-development, on-the-job training, and off-the-job training that supplements on-the-job training (see Figure 1 on the following page). Emphasis is placed on integrating the parts of the system.

On-the-job training. This educational activity is the responsibility of managers/supervisors and has advantages not found in off-the-job training such as: it connects directly to the work; the manager/trainer can use any circumstance that actually occurs; training can go on as long as it is needed; a working relationship strengthens personal ties; there is minimal preparation and setup cost; employees see it as highly relevant and appropriate; and it helps managers to discover workers' aptitudes.

Off-the-job training. Off-the-job training satisfies general and abstract knowledge needs. It includes some occupational education. New employees and managers/supervisors receive occupational educations that is correlated horizontally with the general and management knowledge needed at each rank level. Problem-solving training and language education are provided for all regardless of what their work may be.

FIGURE 1

OKI ELECTRIC COMPANY'S EDUCATIONAL SYSTEM PLAN



Two aspects of off-the-job training that deserve special mention follow:

Management development training. The development and training of managers is correlated with ranks in the promotion ladder as established by their personnel system:

- From entrance, age 22 to 30/32, the supervisor (kacho) is provided with rotational experience in the finance, comptroller, personnel management, and other functions. Correspondence courses are provided on such topics as how to train employees, how to do the job itself, and how to maintain good relationships with managers and with subordinates.

- From age 32 to 42, employees are given in-company training, as well as management training by correspondence, in cost accounting, marketing, and data processing. During this period, they also are interviewed by representatives of personnel for the purpose of discussing career plans and future placement. They receive a three-day management training course that includes management games, planning, decision making, and adapting to change. From age 37 to 42, they receive training that includes manager (bucho) business games, instructing groups, marketing, production, and finance.

- The age range from 42 to 45 is the most important mid-career time for decisions on manager placement.

- From age 45 to 60 is the last period in which higher-level managers receive top manager and executive training.

Correspondence training. The Human Talents Development Center of the General Affairs Personnel Head Office administers a correspondence education program for Oki employees. All Oki employees are eligible to enroll. Applications are sent by the Center to the appropriate "teaching organization."

There are over eighty courses available covering eight major areas such as planning, business, accountancy, personnel, production, engineering, and general affairs. Courses are given by eight different teaching organizations: Industrial Efficiency University, Japan Manpower, Business Operation Development, Comprehensive Labor Laboratory, Japan

Engineering Education Development Center, Engineering Laboratory Company, Japan Business Pen School, and Japan Management Society.

An interesting feature is that each course is offered at three different levels: (1) Management Class (MC) that includes employees above the sectional chief level; (2) Middle Class (MIC) that includes employees who have been with the company for more than four years; and (3) Beginner Class (BC) that includes those employees who have been with the company for less than three years. Thus, for example, there would be an Accountancy Finance Course (MC) for the Management Class, an Accountancy Finance Course (MIC) for the Middle Class, and an Accountancy Finance Course (BC) for the Beginners.

Costs range from $10 to $150 (U.S.) per course. Those who take these courses to obtain "official and semi-official qualifications" required to do their jobs are reimbursed. Those who take courses for their self-improvement are partly reimbursed.

TOYOTA'S EDUCATION AND TRAINING SYSTEM:

Continuous Learning at Toyota

The organization of Toyota is unique in that manufacturing and marketing are conducted by separate companies. Vehicles are manufactured by the Toyota Motor Company, established August 1937, but are marketed by Toyota Motor Sales Company, established April 1950. Toyota's production in 1980 set an all-time high of 3,293,344 vehicles. Toyota has ten plants in Japan; however, in 1980, 349,340 Toyota vehicles were manufactured and assembled at 23 Toyota overseas subsidiaries, associated companies, or locally owned companies in 17 countries. Its employees number 52,596 with 47,604 in Toyota Motor Company and 4,992 in the Sales Company.

Toyota's major products are automobiles, application of new automotive developments, manufacture of prefabricated housing units, and manufacture and sale of machine tools. Its marketing is divided into domestic and overseas sales. In addition, Toyota is very active in research and development and public interest activities such as supporting a Traffic Environment Committee, the development of new urban traffic systems, international personnel exchanges (such as foreign student Toyota tours), and scholarship programs that give American high school students an opportunity to visit Japan and to learn about its people, traditions, and way of life during a two-month stay. The Toyota Foundation contributes to the widest possible range of outstanding domestic and foreign projects and undertakings. Its grants program finances research projects in Japan that relate to social demands upon the country.

Overseas, Toyota operates in 133 countries and 157 locations with more than 150 overseas importer/distributors and 6,700 auto dealers, most of which are independent firms established by local investment. Toyota's 18 overseas subsidiaries and associated companies in 11 countries play an important role in Toyota's overseas activities with their own contributions to the fields of design, research, assembly, and production in addition to their import and wholesale activities.

Management principles, upon which the training, development, and education of its work force are based, follow:

- The fostering of capable staff and the development of their abilities is most important, because the motive power of management is in the people. Toyota does not hire and train a man just for a specific job, but looks at what he can be developed to do.

- When management is truly alive, it is changing all the time. Therefore, people who are the motive power of management must be renewed continually. And, therefore, management fosters a continuous rebuilding process. <u>There is no end to the development of people's abilities</u>.

- All development is based on self-development, since the need to develop one's abilities varies with each person. The motivation, desire, effort, responsibility, and obligation to develop one's own abilities are in the person himself. The role of the company is to assist and support that process.

- Most abilities development results from the experience of routine work; therefore, on-the-job training is the most important part of company education.

- In addition to being a good businessman, every manager must be a good educator. In order to carry out the important functions under his charge, he must make effective use of his staff.

- Effective methods of helping subordinates to develop through on-the-job training are: providing new experiences through the enlargement and the changing of their jobs, and giving them an opportunity for decision making.

- The rotation system answers the need to keep workers alive, up-to-date, motivated, and learning how to cope with the many kinds of day-to-day operations. New experiences through the

enlargement or changing of jobs helps to maximize the abilities of the workers.

- It is the company's duty to make a long-term education plan from a total management viewpoint, although employees' current functions and abilities are of great importance. Since there is a limit in personal capacity as to time, expense, contents, and method, the company gives assistance to the individual.

- Character building, such as the right view of life, moral sense, and social code, is important because Toyota believes that good businessmen must be good people.

Training/Learning Programs

These programs are specific to each of the major classifications or categories: manager, clerk/technical staff, manual laborer, and female staff. Each classification is further divided into several levels for which specific kinds of training and education are provided.

- All company group training (given by Central Personnel Department).

- Self-development.

- Advanced education and practice (domestic and abroad).

- On-the-job training.

- Outside-the-company lectures.

Management Processes that Bring Learning, Growth, and Development Together

- Decision-making processes involve all those workers who are affected by a situation or problem requiring solution and decision.

- Quality control processes educate workers in the fundamentals of sound quality control. These processes are also open to a large number of trainees from Toyota's cooperative suppliers. They participate annually in quality control education programs to develop their skills in this field. Reliance is placed on the voluntary Quality Control Circle activity (in operation since 1964) which provides workers with the opportunity to make creative suggestions to resolve quality problems based on their own working experiences. As a result, not only is quality improved in the design and assembly structure of Toyota vehicles, but also a high work-force morale results from a sense of real

participation. Toyota now has 4,540 Quality Control Circles. Most American companies of comparable size have few or none.

- The introduction of automated and mechanized systems, and the periodic rotation of job stations to combat boredom and fatique, validate Toyota's high respect for employees and demonstrate their provision of opportunities for employees to continue to learn new responsibilities and to enlarge their capabilities.

- In an effort to increase employees' feelings of participation, independence, and motivation, line-stop button systems make it possible for any worker to stop the entire production line should defects or problems arise. Thus, workers learn to meet and solve problems.

- The suggestion program, introduced in 1951, encourages workers to submit suggestions about their own jobs. In 1980, each employee submitted a remarkably high average of 19.2 suggestions, and 93 percent of the total submitted were adopted.

- A just-in-time production control system has eliminated waste production, inventory buildups, and has spread management responsibility down to the shop floor. This delegation of management responsibility has increased the abilities of its lowest-level managers to learn how to reduce the costs of excessive inventory (accumulations which waste money), imbalances between departments, idle-time overmanning, excessive capacity, and poor maintenance. The system insures that only the required number of auto parts are manufactured by Toyota and delivered for assembly at the moment they are required.

LEARNING AT TOYO KOGYO MAZDA:

A Training and Education System

Toyo Kogyo Company, established in 1920 with headquarters in Hiroshima, Japan, today serves a global market in automobiles, machine tools, rock drills, measurement instruments, and molding materials. In order to make progress and technical innovation for new and better products, it has introduced new manufacturing concepts, located and eliminated waste, invested in automated machines, and achieved harmony and cooperation between management and employees. Its extensive training and development program reflects top management's concern for and trust in human beings. The belief that their employees are their greatest asset, and a corresponding commitment to their development through good supervision, training and education, and assistance in personal needs have been rewarded by employee interest in quality control, cost reduction, technological innovation, and increased productivity.

Its Industrial Relations Department, headed by a Senior Managing Director, includes labor affairs, personnel, labor administration, education and training division, and safety and work environment. It is significant that the Senior Managing Director who heads these functions is one of the three high-ranking Senior Managing Directors, and that the industrial relations function receives strong leadership, support, and respect. Responsibility for training is divided between the staff office and the line supervisors, and it is very clear that the supervisor is held responsible for a planned and effective on-the-job training program.

Furthermore, the training courses for supervisors provide continued assistance to help them carry out their training functions for 27,324 employees.*

The training system for technical employees brings mostly high school graduates into the company, developing inexperienced workers into highly developed craftsmen (see Table 1: Toyo Kogyo Mazda's In-Company Education and Training Program on the following page). The required training programs include:

- Orientation for one month, which provides practical training of fundamental skills such as milling, machining, as well as general and practical knowledge about the company, relations between the company and the labor union, and working conditions.
- Practical training for four months, which is accomplished in the plants, to gain knowledge and skill for their work.
- Of these new employees, about 50 are selected for a one-year "in-company education and training course," consisting of 2-hour classes held four times a week after working hours. About five times a year this group is lodged together for group experiences in learning how to become the leading workers of the factory. They receive core worker education in engineering and technical skills and also study methods that promote clear thinking and responsibility. As a result of this training, they become multi-processor operators who can take charge of multiple machines and a wider range of functions. One of the objectives of all training is Total Productive Maintenance (TPM); as a result, virtually all of the workers can do maintenance work on the robots.

After initial training, the program provides for both technicians and for foremen training:

- Pre-foremen education is given to about 140 persons a year who are scheduled to become foremen. This is a one-year course, with 8-hour classes held two times a month, with 50 percent of the classroom work after working hours. Two to three times a year this group is lodged together. They are trained in subjects necessary for their work and in cultivating clear thinking.
- Newly promoted foremen training is a 10-month course of 8-hour classes held one time a month. It is based on correspondence

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*All company-sponsored training courses, both required and mandatory, are held at their training center (housed in two buildings, one of which specializes in technical training and the other in education).

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TABLE 1

TOYO KOGYO MAZDA'S IN-COMPANY EDUCATION AND TRAINING PROGRAM*

EDUCATION AND TRAINING COURSES	EMPLOYEES TO BE TRAINED	PERIOD OF TRAINING	CONTENTS OF TRAINING
ORIENTATION FOR NEW EMPLOYEES	New Employees	1 Month (Lodging Together)	Practical training in fundamental skills such as milling, machining, etc. Lectures on general and practical knowledge about the company and the rules of employment: Outline of Toyo Kogyo Mazda, Working Conditions, Relations Between the Company and Labor Unions, Quality Control
PRACTICAL TRAINING IN THE PLANTS	New Employees	4 Months of training after having orientation	Cultivate sufficient knowledge and skill for their work Practical training in the main plants
IN-COMPANY EDUCATION AND TRAINING COURSE**	Junior Employees (age 22 to 30) Service Carrier: (more than 4 years) Those who have passed examinations (140 people/year)	1-Year Course: 2-hour classes held 4 times a week (after working hours) (Lodging together for 5-6 times throughout a year)	Promoting the ability to think clearly and to develop a sense of responsibility 9 Required Subjects, e.g., History of Science and Technology 2 Elective Subjects Job accomplishing skills, etc. (Those who take this course will become the leading members of the factory.)
PRE-FOREMAN EDUCATION***	Those who are scheduled to become foremen (140 people/year)	1-Year Course: 8-hour classes held once a month (based on correspondence study) 50% of the classes are held after working hours (Lodging together for training 2-3 times a year)	Cultivate the way of thinking Training in the subjects necessary for their work such as personnel administration
NEW FORMEN ORIENTATION TRAINING	Newly promoted foremen	10-Month Course: 8-hour classes held once a month (based on correspondence study) including 3 full-day sessions	General supervisor and management training: How to Supervise, How to Train People, Human Relations, Safety, Quality Control, Scheduling and Control of Production, Labor Relations, Personnel Administration, etc.

NOTES: *High school graduate, blue-collar workers.

**This course is common to high school graduate office workers and engineers.

***The same kind of supervision and management training for section chiefs and department/division managers is provided.

study and includes three full-day sessions. Subjects include how to supervise, how to train people, human relations, safety, quality control, scheduling, control of production, labor relations, and personnel administration.

- Technicians receive continuing training on the job such as special expertise in each class ranging from Class E to Class A (distinguished technicians). They also are given support for self-development. Toyo Kogyo is accredited to give official licensing for various skills such as die metal, die finish, and many others.

Turning to the training system for managerial personnel (see Table 2: Toyo Kogyo Mazda Managers and Employees Training Program on the following page), one finds the required programs of orientation, followed by a training course for junior employees, a training program for senior employees at the time of their promotion, then division manager training. This is held three times a year with presentations by company executives, learning company policies, targets, group participation in setting up a long-term plan, and presenting such plans for the critique of other managers. They also work on business simulation problems in finance, production, international marketing as well as participating in cooperative exercises, such as making airplane models, to learn the need to work together for effective production. Finally, there is department manager training, a total of six days divided into three sessions, which assists the new department manager in understanding and performing his functions.

In addition to the above required training, Mazda provides many voluntary opportunities. In 1980, figures showed that 79,063 man-days were used at the Education and Training Center. Each employee used the Center's facilities an average of three days during the year. Voluntary studies are not limited to work-related subjects. Foreign languages, teamwork projects, value and industrial engineering, drafting and design, and oral communications are just a sample of the many (58) courses available to

TABLE 2

TOYO KOGYO MAZDA MANAGERS AND EMPLOYEES TRAINING PROGRAM

	MANAGERS	SENIOR EMPLOYEES	JUNIOR EMPLOYEES	NEW EMPLOYEES
FUNCTIONAL EDUCATION	DIVISION MANAGERS TRAINING (2-DAY SESSIONS HELD QUARTERLY) FOREMEN TRAINING (3-DAY SESSIONS HELD QUARTERLY, INCLUDING ONE-NIGHT SESSIONS HELD EACH MONTH FOR FIRST YEAR) NEWLY PROMOTED DEPARTMENT MANAGER TRAINING (TOTAL OF 6 DAYS DIVIDED INTO 3 SESSIONS) NEWLY PROMOTED SENIOR MEMBER TRAINING (4-DAY SESSIONS AND 6-MONTH CORRESPONDENCE COURSE) NEWLY PROMOTED FOREMEN TRAINING (1-YEAR CORRESPONDENCE COURSE BY OUTSIDE INSTITUTION)	TRAINING AT TIME OF PROMOTION • SENIOR MEMBER (3-DAY SESSIONS FOR G-GRADE PERSONNEL) • SENIOR EMPLOYEES (2-DAY SESSIONS FOR G-GRADE PERSONNEL)	THE TRAINING COURSE	ORIENTATION FOR NEW EMPLOYEES
COOPERATIVE CAPABILITY IMPROVEMENT TRAINING	WORKSHOP DEVELOPMENT PROMOTERS TRAINING TEAM WORK PROJECTS (MAINLY THROUGH MAKING PLASTIC MODELS AND RALLY ON FOOT) MQ CIRCLE PROMOTERS TRAINING			
JOB PERFORMANCE IMPROVEMENT TRAINING	BUSINESS SIMULATION (DIVISION MANAGER) COURSE ON DEVELOPING CREATIVITY FOR ENGINEERS COURSE FOR TRAINING EDUCATIONAL INSTRUCTORS	COURSE FOR VOCATIONAL TRAINING INSTRUCTORS PROFICIENCY TEST AUTOMOTIVE MECHANIC		
	ENGLISH CONVERSATION COURSE FOR THOSE TO BE DISPATCHED OVERSEAS			
VOLUNTARY SCHOOL	MANAGEMENT LECTURES: (SATURDAY LIBRAL ARTS COURSE) CORRESPONDENCE COURSES: (FOREIGN LANGUAGES, BUSINESS WRITING, VALUE ENGINEERING, INDUSTRIAL ENGINEERING, HOW TO WRITE TECHNICAL REPORTS, MATHEMATICS, AND DRAWING ARE AMONG THE 50 AVAILABLE COURSES PROMOTING ACQUISITION OF QUALIFICATIONS: (SMALL ENTERPRISE CONSULTANT, CONSULTANT ENGINEER, ENGLISH PROFICIENCY, AUTO MECHANIC, ETC.			
PARTICIPATION IN OUTSIDE PROGRAMS	ATTEND SEMINARS DISPATCH OF PERSONNEL TO OUTSIDE LECTURES			
PROVISION OF INFORMATION	MANAGERS INFORMATION (WEEKLY) SUPERVISORS INFORMATION (WEEKLY) WEEKLY COMPANY COMMUNICATION			

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employees. In addition to these off-the-job training courses, we need to consider the multi-faceted programs for learning through the work itself:

- Both technical and managerial employees learn through being rotated systematically to different jobs. For example, the new technical worker goes from welding to the assembly division, while the managerial worker may start in finance, go to sales, to a retail store, to industrial relations. Mazda believes that it is through experience that the employee learns more.

- Mazda Quality Control groups (MQC), or circles as they are often called, provide another valuable forum for employee participation and learning through problem-solving activities aimed at improving safety, productivity, quality, reducing costs, and enriching human relations. Mazda has about 1900 circles with 15,000 participating employees. These groups do not include anyone who ranks above section chief or department manager. The circles are a voluntary, not a mandatory, activity. The Mazda philosophy is that the purpose of MQC activities is to pursue the philosophy that a person is a human being -- and not a robot -- and that a human being is trying to improve the process of his job. Not only do employees participate, but also they feel a sense of achievement in bringing about productive change.

- Man-to-man or one-on-one training provides an expert tutoring system on the job. The care with which the older, more experienced workers help a younger, newer employee learn on-the-job helps to develop the skilled and capable worker. And from the first, it is clearly understood that the responsibility is with the individual to learn, that he will receive help, and that all will have an opportunity to learn and to develop a successful career with Mazda.

- "Jidoka" and foolproof devices make the machines or operations stop. When an abnormal situation occurs, an automatic warning is given. The group of concerned workers then meets and works out a solution to the problem.

TRAINING AND EDUCATION AT THE METROPOLITAN GOVERNMENT OF TOKYO

The Metropolitan Government of Tokyo employs approximately 60,000 people in various municipal offices; in addition, there are 21,000 who are teachers in the public schools and members of the police force. Management provides many different kinds of training such as orientation for the new employees, management training, technical and skill training for individual offices, and training for the administrative heads of each office.

In a recent speech, the Governor of Tokyo stressed the importance of training city employees, developing careers, obtaining a general education, maintaining relationships with the people of Tokyo, developing ability in speech and conversation, writing papers for the government, as well as the importance of recreation and of getting to know one another.

In April of 1981, 300 new employees entered the city service. They were divided into two main groups: those graduating from college and all others. An orientation training of 18 days is provided to all new employees.

Organization for Training and Education

Organizationally, Training and Education is part of the Personnel Department. The responsibilities for training are divided between the Central Training Office, that services all departments, and the training centers of the individual departments. The Central Training Office, which has been in existence for 31 years, has 4 staff members, 18 teachers, and a large number of assistants. Members of the staff discuss and work out the curriculum, plan courses, and make training plans. They may call

teachers from other offices. They have specialists in certain subjects such as general policy, management, and finance. In the field of management, they develop their own case studies around real situations in public management. Courses are either compulsory or optional.

Personnel System

The personnel promotion system is closely related to training and development. In each rank, the employee is not only performing his work, but also is studying in anticipation of being selected for the next higher rank. There are tests for each rank, and if the workers do not pass the tests, they do not go on. After six years, employees can take a test to be a supervisor. If they pass, they move a rank upward to that of supervisor. If they do not pass, they wait until their twelfth year of service. Employees are continually developing themselves to prove their ability and to demonstrate their preparedness to move up a rank.

On-the-job Training

On-the-job training is provided in each of the offices. The individual bureaus are responsible for on-the-job training and for providing special training for special jobs.

Supervisory Training

Supervisors learn how to instruct their subordinates in this compulsory training. Learning relationships between managers and workers, and how to maintain them harmoniously, is very important. Usually supervisory training is five days in length and is conducted in conference style so that the supervisors get to know each other.

Outside Training

A variety of off-the-job training, held outside the Tokyo Metropolitan Government, is supported and sometimes paid for by the city. Examples are attendance at various night schools and universities. Attendance at special seminars and conferences also is supported.

Training for Top Chiefs

Special training is provided for the top chiefs of departments. The contents of these courses include international society, current issues, and political situations which are more international in theme.

CONTINUOUS TRAINING AND LEARNING AT TOSHIBA:

Education and Training Systems

Toshiba Corporation, Japan, is the producer of machine tools, plastic molding machines, synthetic fiber processing equipment, printing machines, die casting machines, hydraulic equipment, food processing equipment, computer services, and "plant package" service. In addition to its head office in Tokyo and its plants in Japan, it has the Toshiba Machine Company of America with offices in Los Angeles and Chicago. Toshiba has had a remarkable record of outstanding achievements in the manufacturing world.

Toshiba's fundamental philosophy is that there are limitless possibilities within man's capabilities. The company believes that the growth of the Japanese economy has been supported by its technical and vocational training system. It feels that if the individual's potential capabilities remain unfulfilled, then there is a great loss both to himself and to society.

In order to manufacture better machines and to maintain their effective use, Toshiba has maintained its own internal training and education system since 1954. It has perfected this system, enabling its graduates not only to pass the Trade Skills Tests of the Japanese government, but also to become productive engineers, instructors, and managers.

Personnel Systems

Recruitment is normally in April, during which time graduates of junior high school, senior high school, and college between the ages of 18 and 22 are hired.

Promotion (career paths) is according to rank and seniority, providing learning through rotational experiences for the managerial interns. Rotation

is supplemented by group training sessions, home book study, and monthly discussions. The first 12 years are spent in rotation to a variety of operational experiences until the intern becomes a section chief. After 20 years, at the section chief level, the manager can be a department manager and later an executive.

Toshiba believes that managers must be developed through the rotational process. Managerial roles are changing and are becoming less directive. Hence, it is more important to plan, to analyze, and to think.

Toshiba has a company union. Management and the union work very closely together. In cases of a decline in sales, strikes, or work disturbances, management and the union representatives manage to reach an understanding.

Training and Education Systems

Prior to discussing the Training and Education Systems, mention should be made of management processes that stimulate learning and the growth of employees. Basically, management is a small-group system. Workers on the assembly line work in small groups using the "just-in-time" process, which eliminates warehousing and the maintenance of inventories and brings up the needed materials "just in time." Groups handle different steps in the production line and are motivated through small-group discussions, especially in their Quality Control Circle meetings, to increase their productivity and to keep high standards of quality.

On-the-job Training. Toshiba's foundation for employee development lies in the learning systems that work through rotational experience and through the ways that managers and supervisors help their subordinates to learn.

Off-the-job Training. In addition to learning on the job, Toshiba has provided a wide variety of learning experiences off the job:

- The International Business Program provides one year of English, customs, foreign trade, and conducting business affairs abroad. Instructors are brought from the United States, and contracts are made with schools from abroad. One-half of their manager trainees are sent to U.S. schools.
- The pre-management development course provides for the study of planning, budget, setting objectives, personnel management, systems development, how to be a good supervisor, decision making, information processes, individual development, and reporting.
- Management training provides marketing information, engineering design, customer needs, personnel administration, production, and a variety of technical subjects.

Technical Vocational Training Systems. Toshiba now offers this modern and well-established technical training service to other companies including those from abroad. Japanese language training is provided five weeks prior to technical training.

There are four major programs: (1) Fundamental Technical Training Program, (2) Specialized Technical Training, (3) Supervisory Technical Training Course A, and (4) Supervisory Technical Training Course B. Descriptions of participants, program length and content, and what graduates are qualified for is contained on the following page in Table 1: Toshiba Vocational Training Systems.

TABLE 1

TOSHIBA'S VOCATIONAL TRAINING SYSTEMS

PROGRAM	OPEN TO	LENGTH	CONTENT	QUALIFICATIONS UPON COMPLETION
Fundamental Technical Training Course	Junior High School Graduate	6 Months to 1 Year	Select from divisions such as machinery division (grinding, gear cutting), assembly finishing, electric, foundry, wood pattern, metal plating, painting, etc.	Proficient technician in factories
Specialized Technical Training	Junior High School Graduate	3 Years	Theoretical (3000 Hours) General: physics, math, language, civics Practices (2700 Hours) Specialized as required by law for vocational training	Technicians of versatility or technical supervisors
Supervisory Technical Training Course A	Completion of Specialized Training	2 Years	Theoretical (1100 Hours) Specialized engineering, mechanical, electrical production, machine engineering, material science Practices (2700 Hours) Management classes, guidance classes: principles of vocational training, instructional methods, pedagogical psychology, guidance for living from the fundamental technical training course (two divisions)	Technical supervisor in factory
Supervisory Technical Training Course B	Technical High School Education and Graduates of Special Technical Training Course	2 Years	Theoretical (1700 Hours) Specialized engineering, management classes, guidance classes. In addition to two divisions selected from the 6-month fundamental technical training course, the practices of other vocational divisions must be accomplished	Instructors in training institutes or supervisors at workshops as members of the managerial staff

II. MANAGEMENT DISCUSSION

RINGI-KESSAI
NEMAWASHI
UKAIGI
KANBAN
JIDOKA
"OPEN OFFICE"
KACHO
BUCHO

As the case studies have demonstrated, the successful development of Japanese employees has been stimulated and nourished by the learning that is integrated with management's work processes, organizational structure, and the work environment it establishes.

Management Philosophy and Policies

Every organization's statement of its philosophy shows a high concern for and appreciation of its human resources. More important is that this concern is continually evidenced to employees by the action of management at all levels. For our purposes here, we can describe a consensus of these different policies:

- Education and training is provided systematically, because a company's success is dependent on the people who determine the fate of an enterprise. Japanese companies believe that the growth of the Japanese economy has been made possible by the development and training of its work force.
- Education and training is an integrated part of all operations in the company through the continuous effort to design work processes, personnel systems, and training that evokes learning.
- Managers will assist employees in their growth both individually and through group participation. In return, managers expect self-development from their employees and provide a work environment to enhance this development.
- Employees' abilities must be developed to the fullest, since there are limitless possibilities to man's capabilities.
- Employees' participation with managers gives employees a feeling of belonging to a family.

- Groups must be encouraged to learn to solve operational problems and to suggest ways to improve quality and to eliminate snags. Group collaboration and coordination compensate for the lack of communication which often arises in large, complex organizations.

- The company assists personnel in improving their own capabilities, so that they will carry out their duties at a high level of efficiency, with a strong sense of personal responsibility, and with a spirit of cooperativeness that maximizes organizational performance.

Such policies and goals are impressive, but even more so are the actions that show the interest in and commitment of top managers to the development of human resources. Their ideas are demonstrated in surveys of employee training and development needs such as those arising from continuing changes in technology and operations. Top management discusses training and development plans, both long- and short-term, and reviews the accomplishment of individual programs as well as the yearly record of progress (see Japan Airlines, Seiko, Oki Electric, and Dai-Ichi Kangyo Bank case studies). Top managers, including presidents and vice-presidents, boards of directors' members, and department directors, participate in training sessions, share company information, and issue circulars giving guidance to managers on the training and development of their employees. They review rotational assignments and believe that periodic changes in employees' workplaces develop the abilities of their workers, lift their morale, and bring a sense of belonging to the company. They support the introduction of new learning technologies from the U.S. and Europe.

When we know that the leadership of companies believe that if an individual's potential capabilities remain unfulfilled, "there is a great loss to himself and to society" (see Toshiba case study); that an environment must be established to help workers work creatively (see Canon case

study); we can understand why the interest, commitment, and support of top management breathes life into continuous learning. Even now we find that the directors of companies are concerned by changes and trends that affect the development of manpower. They study the data analyzed from research of these trends such as the increased age of the work force, the values of the younger members of the company, and the rising number of women entering the work force (see Oki Electric Company case study).

Planning and Control

The process of planning, goal setting, and control in Japanese organizations helps to make the development of personnel the continuous learning process that it is. First, the emphasis is on long-range goals, and managers are not judged by short-term goals. There is no pressure to lay-off employees in order to reduce expenditures and to give the appearance of sound financial conditions. The stability of employment makes employees feel secure and motivates their desire to learn and to grow continually.

Second, training and education functions are seen as long-term goals for personnel development. Training is no longer regarded as an instant fix to correct individual performance. The old notion that training is a remedy has given place to the concept that personnel development is primarily self-development and is a long-range goal. Employees share in this confidence that continuous learning is positive and productive.

Third, the process for planning short-, middle-, or long-range goals, as well as the planning of programs for training, is thorough, detailed, comprehensive, and provides opportunity for levels from the bottom up to participate and provide comments on proposed training programs through "ringi-kessai" (their method for decision making).

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Fourth, the planning for follow through is similar to a management-by-objectives approach. The setting of objectives is one of discussion and negotiation between management and employees, a way of thoroughly talking about expectations and ways of accomplishing them that helps both manager and employee to learn.

Fifth, another aspect of planning that does much to stimulate the Japanese employee is the personnel system of recruitment and placement. From the moment of initial hire, planning for future development commences, since the "whole man" is hired rather than being recruited for a single job. The planning focused in an individual development plan includes rotational placement and explanation of the positions toward which an employee may develop himself.

Organizational Structure

The way an organization is structured can be a help or hindrance to the learning process. Several features of Japanese organizational structures are conducive to continuous learning.

Their flatter type of organization lessens the number of layers and gaps between management levels, opens up communication, and makes it possible for one organization level to listen to and learn from another vertically. Furthermore, it makes possible the addition of new frameworks, temporary collaborative groups needed for coordinating action that energizes continuous learning among members of the group. The combining of different knowledge bases and viewpoints, all concerned with a single project, goal, or product, makes for mutual understanding and learning and achieves the needed action.

Typical hierarchical organizations seen around the world can stand in the way of the development of personnel when too many vertical levels

slow communication and understanding, provide organizational barriers to assigning employees to different projects, and make it very difficult to form collaborative frameworks. Flat, streamlined organizations, more horizontal than vertical and often with sections abolished, facilitate working as teams, bring managers and employees closer together, and make possible the reassignment of employees to different kinds of work. Even where the section, sometimes called the building block of the organization, remains intact, work is assigned according to general abilities, and this flexibility of assignment, although it may make the individual's role less clear, does much to promote an attitude of continuous learning.

Decision by Consensus

One of the most well-known Japanese management processes is "ringi-kessai," decision by consensus, which is typical of their style of bottom-up management that is suitable for some management situations. Here, we need to see its importance as a learning experience that kindles individual understanding and growth as well as group learning. The process is focused on what each decision is really about, and in defining the questions which need to be resolved, rather than concentrating only on what the decision should be. This places emphasis more on the "what" and the "why" than on "who" is involved, thus reducing adversary situations when personal viewpoints come into conflict. Furthermore, ringi-kessai deeply involves the people who will later carry out an eventual agreement. Since it is essentially an information-gathering process, people are not forced to take sides, and anyone making a proposal that is not accepted can easily "save face." This generates the full contribution of ideas and maximum learning. Nothing really gets done until all agree. In Japanese this is called "nemawashi" or root-binding before transplanting a tree, and

that is what this process accomplishes: the bringing together of all minds so that, after a full resolution of differences and concerns, they think alike and have a common goal. When such proposals reach top management, they are referred to an appropriate group of people, and it is their decision that builds on the consensus and determines the final answer or policy.

Once the decision is made, everyone gets behind the same goal. The process has consulted many people (often as many as 80) representing different levels and kinds of work: the president, vice-presidents, section heads, managers, foremen, workers on the assembly line, salesmen, and accountants. All concerned absorb a great deal of information and learn much about the situation or problems, getting to know the ideas of others, and clarifying their own thinking through this process.

Another benefit is that employees really shape their own work and, in this context, transform the content of their daily duties. It is interesting to note that skill in handling a proposal, "ukaigi", is taught to the newcomers and is included as part of the initial training for managers. Employees practice and learn how best to move proposals through this process: taking the initiative to write a proposal, gathering pertinent information, consulting with all those concerned with it, calling attention to the relevant issues, and properly presenting the matter to higher officials.

Group Processes

There are several Japanese management processes, such as the decision-making process, which stimulate learning on a day-to-day basis and accomplish the major objective of the process.

Quality Control Circles are used almost universally in Japanese organizational life. These are small groups of employees (about ten) who do similar or related work. These groups meet regularly for an hour three to four times a month to identify, analyze, and solve a production problem and to improve general operations. Either workmen or foremen act as leaders. Participation is voluntary, but there is peer and management pressure to attend. Generally, participation is high. A variety of things are studied, and ideas are gained for improving whatever situation interferes with the effectiveness of work or is an obstacle to quality whether it is a mechanical defect, a faulty product, or a personnel problem such as absenteeism.

These circles create experiences which help participants to learn about a situation, to discover ways to correct the problem, and to participate in the application of the solution. Most company training courses include Quality Control Circles: e.g., at Toyo Kogyo Mazda the course is named "Mazda Quality Circle Promoter Training."

Teams and problem-solving groups are either formed voluntarily at the workplace or may be appointed to work on a special project. As in the Quality Control Circles, the challenge of working and learning to produce a better way of handling work is stimulating to the workers who gain the feeling that they are part of a group with the responsibility to find the best process to achieve more quality and more efficient work. In fact, they learn daily about the management of work through their own experiences and that of their peers.

Active and productive suggestion systems stimulate employees to think of ways to improve the quality and quantity of their work. Toyo Kogyo Mazda reports "80,000 suggestions in one year of which over 60 percent were adopted." These suggestions represent advances in thinking and

learning, improvements in the quality of the work, production facilities, and of the product itself. In addition, Japanese management sponsors a variety of group activities such as "start-the-day" exercises, singing, and gathering groups for events of special significance.

Production Systems

Production systems stimulate learning, because prime consideration has been given to respect for employee initiative, efficiency, environmental protection, and conservation-oriented systems. This is especially the case of "kanban," the just-in-time production system. Toyo Kogyo Mazda's goal was to design a system that provides what the customer needs at a reasonable price, at the highest level of quality, and within the shortest possible period of time. This led to an examination of the production cycle to determine what caused unnecessary costs. Idle surpluses, such as a large inventory, were discovered. So managers and workers together eliminated surplus stored inventory, imbalances between departments, idle time, overmanning, excessive capacity, and poor maintenance. The system insures that only the required number of parts are manufactured and delivered for assembly as soon as they are produced. This has eliminated wasted production and inventory buildups and has spread management responsibility down to the shop floor. Thus ended the luxury of large inventories which not only tied up capital and space, but also encouraged workers to become slipshod about maintenance and to operate less efficiently (see Toyota, Toyo Kogyo Mazda, and Toshiba case studies).

Work Design

Japanese management believes that 90 percent of the development of worker ability results from the experience of ordinary routine work itself.

Consequently, a great deal of attention is directed to how work can be meaningful, how it can enable workers to realize their potential, and how it can provide self-fulfillment. Therefore, an employee learns the work through the work processes, in doing the work, and in seeing how valuable the products of work can be. The Japanese believe that work is waste unless it creates value. Work is seen as providing much more than a living, because it gives the worker the challenges he needs to grow, to learn new tasks, to participate with his fellow workers not only in work tasks, but also in solving problems, to contribute his ideas, and to gain a sense of belonging through his work and happiness through enjoying his work.

Work is designed by management, and jobs are structured by personnel systems in ways that encourage initiative and stir the employee to think and to learn both as an individual and within a group. On-the-job training means something quite different than the ways in which we traditionally think of it in the United States. It is truly the basis for developing the Japanese worker and is a carefully planned, well-thought-out process in which the manager, supervisor, tutors, peers, and the sempai-kohai relationships guide, counsel, and train (as will be discussed in Continuous Learning and Training/Education Systems). But the important thing is that the work itself is the central locus for continuous learning, whether it is the way the work is assigned or designed, operated or evaluated, or inspected or improved; in short, the work energizes the worker to learn and to grow. Some examples will illustrate this centrality of learning through, in, and by work.

In production and factory work, one finds the development of multi-skilled workmen. Workers take charge of machines that require multiple skills and are able to accept the periodic rotation of their job stations.

This wider range of functions enables them to cope with fluctuating volume and diverse mixes of products. It brings about repeated opportunities to learn new responsibilities, to enlarge their capabilities, and to reduce the monotony, boredom, and fatigue of the assembly line.

Work systems and production lines are designed so that workers learn how to correct an erroneous situation through line-stop button systems which make it possible for any worker to stop the entire production line should defects arise. As Toyota says, "fundamentally, people run the advanced robots and machines of Toyota rather than having the machines run them." Workers learn how to use "jidoka," or foolproof devices that stop the operation automatically when an abnormal situation develops at the Toyo Kogyo Mazda plant.

Workers join together in groups to redesign their own work or to consider and submit suggestions with the ever-present idea of improving quality. The Quality Control groups, decision-making process, and team projects all encourage individual workers to make recommendations and to develop ideas which improve work processes.

In this connection, the introduction of robots and other automated mechanized systems are seen by workers as ways to improve their work by relieving them of less desirable duties. Worker approval of new labor-saving devices is gained through discussion with and acceptance by union representatives, and the introduction of their use is accomplished through training sessions.

An important part of work design is learning to maintain a good work-place, keeping work organized, improving the work environment by eliminating clutter such as "having nothing unnecessary in place." In Toyo Kogyo Mazda,

virtually all workers can do maintenance work on robots, and at least one is trained to teach robot maintenance to other groups in other parts of the company.

Physical Arrangement

The Japanese concept of "the open office" not only provides a favorable environment, but also activates learning. When asked "How do your employees learn on the job," several pointed to the large open office accommodating 50-75 workers. In the midst of other workers, they pointed to the "kacho" (supervisor) and then to the "bucho" (manager). Management is easily accessible for questions and assistance. There is no need for an employee to go to a separate office for help. This physical closeness also encourages a feeling of working together. It visually demonstrates that there is not a large gap, even salary-wise, between managers and workers. Just by walking around where work is accomplished, managers and supervisors are aware of what is going on and can assist more readily.

The Way Managers Manage

A universal rule of Japanese management is that job training is a supervisory responsibility. Every organization agreed that "it is the number one duty of the manager to develop, counsel, and coach his employees." Managers are always given training for this aspect of their job. A strong feature of this training is that managers should nurture individual talents so that each employee may do his best, even if it means that the employee is reassigned to different kinds of work. The manager sets a good example and works to maintain the kind of environment where each worker can contribute his best. "Production comes from the way managers manage" is a common maxim in Japan that is rare in America.

More is involved than the actual training of workers. The manager is expected to spend considerable time on personnel matters. His attention to how his employees achieve their goals, how they perform their work, and how well they participate in groups is matched by his personal concern for their individual problems. He is a friend with a personal interest and concern who is willing to help in personal troubles. Managers are groomed in ways to assign work that provides continuous learning for employees. They are encouraged to spot talent and to use such abilities, particularly to find "the right place" for a worker. One hears little about discipline in the sense that workers must receive some form of oral or written reprimand or more serious corrective action. Rather, criticism seems to be a constructive approach from the supervisor with the major concern being the development of the human being.

It is in the manager-employee relationships at the work site that one sees the day-to-day effort to improve the work and to keep an employee up-to-date, alive, productive, and a powerful generating element for continuous learning. The work site, staffed with managers and employees, is a sort of learning laboratory where learning and the improvement of work are integrated. This is in sharp contrast to the concept common in the United States for work to be one thing and training to be a peripheral course or two taught elsewhere.

The Japanese personnel system for rank and seniority makes it possible for the manager or supervisor to be free from fear of overly ambitious younger workers, because the promotion of the younger worker normally does not come for 8-10 years; thus the supervisor benefits from delegating responsibility and providing challenges to his subordinates. He can afford to share his knowledge and skill and to be unselfish in helping the younger

worker to develop, because the credit goes to him. This sets the climate for learning on a day-to-day basis through teaching the young to learn through fulfillment of work responsibilities.

In their counseling of employees, managers can also arrange for supplementary off-the-job courses either at the worker's request or at the suggestion of the supervisor. This extends their position as a senior figure committed to the productive learning and growth of juniors.

Labor Management Relations

Although less obvious, the healthy and harmonious relationships of management and labor unions is another condition that reinforces continuous learning. The close working together of these groups fosters a strong employee interest in all aspects of the company's operations. Besides concern for sales and profits (companies share profits with workers through bonuses), unions are deeply involved in areas such as improving production processes through quality control, cost reduction, technological innovation, the improvement of work design, reducing the impact of changing technology on workers, and even helping to improve the relationships of the company with the local community. Harmony between management and unions is based on mutual reliance developed over years of close consultation between management and labor. The objective is a stable, fruitful integration of continuing development of the corporation and of the workers. Characteristic of this harmony are frequent formal and informal communications, job-station discussions, and labor management meetings to exchange opinions and information on everything from working conditions to managerial policy. Dialog and cooperation are crucial elements in these good relations, and at the basis of this harmony is the underlying concept that laborers are seen as human beings and not as commodities.

When there is a difference of opinion or a conflict, representatives of labor and management continue talking until they have worked out an agreement. Here the underlying principle is similar to the decision-making process: all views are taken into account, and an effort is made to avoid a "win-lose" situation. The integration of concerns of both parties is seen in the fact that both are working for the same goals, ultimately for the prosperity and well-being of both the company and the individual worker. Unions are company unions, and this makes it possible for the rotation of managers during their earlier development into labor union positions, a learning experience that forever gives them an understanding of the labor side of the coin. A recent study by Nikkeiren (Employers' Association of Japan) shows that 15.7 percent of the Board members of Japanese companies have had union leadership background, and what is even more striking is the fact that 74.15 percent of the companies have at least one executive with union leadership background.

Open communication is a strong factor in maintaining such harmonious relationships. For example, corporate publications are shared with members of labor unions. Management seminars and lectures are often open to labor unions, and the companies are concerned that labor union leaders participate in management training, especially to learn of changes and trends in society and the world economy. Labor unions are concerned with the growth and development of their workers and are particularly concerned with the introduction of labor-saving devices. Through cooperation with management, it is possible to make such changes in the interests of both the company and the union. Take a case where robots are seen as a valuable addition to a factory assembly line. First, informal talks between division managers and the plant's union officials are held. The manager

explains the purpose, benefits, and eventual impact. Union officials are kept informed of studies and the planning of task forces from affected sections. When the formal proposal is made, section managers report informally to the plant's union officials about the installation, benefits, and relocation of workers. Union workers, through these processes, learn of the benefits of robots in making work more challenging in that people are able to move to other tasks, and, in short, to learn more and to develop their capabilities. Since better production is the ultimate goal, they have an opportunity to participate in increasing productivity. Thus, robots are not seen as threats to workers but as aids to improving the quality of work.

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"I WORK FOR MITSUBISHI"
HIRING THE WHOLE MAN
CATEGORIES, NOT JOBS
COMPANY-WIDE EXPERIENCE
LEARNING/PROMOTION COORDINATION
HEAVY FRINGE BENEFITS
EMPLOYMENT CONTINUITY
WALKING RALLIES

The personnel systems of Japanese organizations are an aid to the good management of human resources; they help to build and develop a competent and productive work force and make training and education productive and thus worthwhile. While it is quite common in the United States for the training function to be, at least organizationally, a part of the personnel function, the difference here lies in a more complete integration. Japanese personnel systems are linked with work in ways that complement and reinforce the growth and development of employees, coordinate training, and integrate educational programs. Thus, they are productive of real learning, unlike many personnel procedures in America that limit learning and growth.

Security and Long-Term Employment

Although lifetime employment (the guarantee to an employee that he will work for the company for life) is very much a part of the larger Japanese personnel systems, it is by no means universal since statistics show that only about one-third of the country's work force is currently under lifetime employment. Further, in a declining world economy, traditional lifetime employment systems are becoming a burden on employers because of the increase of middle-aged and older employees receiving relatively high wages and, in some cases, declining in productivity. The

alternatives being sought are reassignment to other work, re-training (see Fujitsu case study), or, if all else fails, dismissal.

However, Japanese workers have had and do expect continuous employment for long periods since the prevalence of long-range goals of companies over short-term objectives precludes reductions of the labor force at times of decreased earnings. Instead of cutting staff, bonuses are postponed, jobs in other parts of the company are found, in fact every alternative is rigorously explored before separation is considered. This commitment has created a feeling of security and confidence in long-term employment that undergirds the continuous learning of employees in several ways:

- Companies find it is worth the investment of time and money to train a work force that will be with the company long enough to realize the benefits of such education;
- Employees are motivated to seek out on-the-job coaching and to participate in company training and education programs, because they know that career advancement is open to all and their jobs are relatively secure;
- The regularly displayed concern of management for the security of its employees makes self-development and learning opportunities more attractive.

Development of Generalists

Japanese personnel systems rely on the concept that a generalist who has had training in many aspects of organizational life will be a more competent manager, especially in the collaborative and coordinating efforts that are the trademarks of their way of managing. This means that there is less emphasis on specialist training. The specialist is limited as a manager in not being able to understand other functions or how to bring all the different components of a project into harmonious production.

Personnel systems provide early rotation of newcomers to a variety of positions. This develops a broad understanding of how the company

works. Managers are not only required to be responsible for developing their subordinates, but also to insure that the rotational process accomplishes the employee's self-development goals. When each manager truly instructs the employee being rotated and insures that he has learned during that assignment, then personal development is not restricted.

This deliberate development of generalists encourages more intelligent coordination of operations and discourages men from moving to other firms where their single-company generalist knowledge does not fit. For example, if a Japanese worker is asked what he does, he most often answers: "I work for Mitsubishi" or "Japan Airlines" or "Toyota." He identifies his career with one company. In America, we tend to think of ourselves as specialists who could work in any company. We would answer that question by saying: "I am a computer operator" or "I am a plant manager" or "I am an accountant." Our specialization encourages mobility between firms, since the qualifications for specialized jobs are similar. Japanese generalized training tends to encourage the employee or manager to fulfill his career within a single company.

Recruitment

Japanese recruitment procedures spark learning in a number of ways. Their system hires the whole man to be developed to his fullest and to be used to perform many tasks rather than hiring a man as qualified for a specific job. In hiring the graduate of a junior high school, a high school, or a university, it is not expected that the newcomer will have any specific skills. The company expects to train and develop each individual for many positions. There is a long period of pre-employment contacts for regular hires. Starting a year in advance of the actual hiring date, many

meetings are held with applicants including company orientation and interviews. Thus, recruitment opens up future work opportunities to the individual within the firm and provides a systematic and thorough pre-employment indoctrination that enhances his desire to learn, to study, to develop himself, and to be ready for promotion throughout his company career.

Placement, Promotion, and Career Paths

Several aspects of Japanese placement procedures provide both stimulus and support for learning. The initial placement does not lock the newcomer into a specific job, but rather prepares him to do various types of jobs in different functions and organizational units and to experience different locations of the company's factories and field offices.

Placement procedures provide routes for advancement to the various levels or ranks of the organization. This affects continuous learning, because the rotation continually moves the employee to new kinds of work, different surroundings, and new work groups. This in itself stimulates him to keep learning. The worker is also stimulated to learn because he understands the career routes, the qualifications required at various levels, and knows that his recorded ability will not be overlooked in his personal development record. The Japanese system of using job categories rather than specific job descriptions also requires him to acquire many skills and information bases.

There is a close link between placement and promotion of employees and the coordination of their training and education programs. For example, early in their indoctrination, newcomers receive both classroom or seminar types of instruction as well as on-the-job training correlated

with rotational work experiences. This not only produces generalists, but also motivates workers to learn. They find that the various levels or ranks are carefully integrated with and supported by training and education courses on- and off-the-job. This is in addition to the assistance and coaching given by the manager, coach, tutor, work groups, and teams. Combining all of these with a strong emphasis on self-development and accepting responsibility for one's own growth constitutes a formidable pressure for continuous learning.

To provide a more detailed picture of the integration and correlation of promotional ranks and education and training programs, see the tables presented in the case studies of Mitsui, Mitsubishi Heavy Industries, Canon, Mitsubishi Corporation, and Toyo Kogyo Mazda. Rotational placement and promotion also apply to staff, production, and technical engineering so that blue-collar workers can realistically aspire to managerial ranks.

A long period (from eight to ten years) is required of the newcomer before his promotion to the managerial ranks. But, due to the flexibility given the manager in the assignment of work, employees are motivated to learn by the assumption of many new tasks before they arrive at the assistant manager level. A bonus of this practice, already mentioned, is that managers and supervisors do not fear that delegating challenging work to subordinates threatens their own security, since it cannot. The new employee focus, then, is on learning and growing through varied work assignments rather than pushing for a higher grade level.

Ranking by Seniority

For the most part, Japanese personnel systems promote employees from rank to rank and pay them by seniority or by the number of years with the

firm. However, there are instances where companies now use performance records as well as seniority, especially at the time of promotion to the first managerial level. Whichever is used, however, one finds a strong dependence on the demonstrated participation in learning activities both as an individual and as a member of a group. Evidences of self-development are strong factors in promotion.

Job Categories

Jobs are classified broadly in categories rather than by specific job descriptions. Japanese companies have tried the classification system used in the United States and found it unsuccessful in their environment. An employee is looked upon more as a member of a group rather than as someone who holds a specific job. For example, in Canon's system there are approximately 200 categories such as personnel, accounting, planning, etc. Within each category there are 15 ranks, each of which is assigned a basic wage plus a bonus equivalent to three months' wages given twice a year.

Japanese organizations maintain considerable flexibility within categories of work. Their system stimulates continuous learning, because managers are not restricted by narrowly conceived job descriptions and can assign work more flexibly. This seems a more natural way to cement continuous learning into the work and to provide continually fresh challenges as well as leeway so that employees find the right workplace and the work they can handle best.

Salaries are set by categories with various steps existing within each. The pay rate is usually negotiated with unions once a year, known as the "spring offensive." Generally, salary systems allow employees to share in the earnings of the company through twice-yearly bonuses.

Separation

From another aspect, Japanese separation practices for personnel reinforce continuous learning. Separation is used as a last resort. This instills a feeling of security, of belonging to a family that takes care of its people. If times are difficult, Japanese organizations stop the bonus payments but do not lay off personnel to "balance the budget." In the case of large corporations, jobs are found in satellite companies known as "zaibatsu." If an employee is not performing well, personnel policy makes every effort to relocate him to a type of work he can perform. It is believed that every man can function in some productive capacity. Normally, the supervisor assigns and reassigns work to help the employee find the particular place where he can be most productive. This "saving of face," the manager's reluctance to embarrass an employee, and the confidence managers place in each worker as a responsible human being reinforces a positive approach to development, that of helping each employee to learn to do his best.

Fringe Benefits

Substantial fringe benefits also build the feeling of employees that the company has their well-being at heart. This indirectly impacts their interest in learning. Employees are provided a wide range of social services: housing at very low rentals or, in event of a home purchase, loans at very low rates. Companies are concerned with employee health and provide various forms of health care, health insurance (jointly paid), and clinics at the office and factory. One finds a host of other fringe benefits such as unemployment insurance, welfare pension insurance, welfare pension funds, and workers' accident compensation insurance. Toyota, for example, has a General Hospital with 26 doctors, 139 nurses, and 403 beds that serves

45,000 employees and their families. Cultural and recreational facilities and sports clubs also are supported by companies for their employees and families. Summer vacation arrangements and hostels are made available. We will discuss Japanese companies' support of generous educational benefits in the next section.

CONTINUOUS LEARNING AND TRAINING AND EDUCATION PROGRAMS

COMPANY COLLEGES
PRODUCTIVE ORIENTATION
WALKING RALLIES
FRESHMAN YEAR
SELF-DEVELOPMENT
SELF-LEARNING PLAN
SEMPAI-KOHAI
CORRESPONDENCE SCHOOLS
OFF-THE-JOB LEARNING
VOCATIONAL EDUCATION

As with management processes and personnel systems, training and education programs are integrated with self-development, continuous learning, and through the work. Instead of being organizationally peripheral, education and training courses amplify what is being learned through experience at the workplace. A seminar on Quality Control Circles, for instance, helps participants learn how to lead, how to participate in these circles, and how to relate them to their workplace.

Because of this integration, it is not surprising to find organizational readiness to use on-the-job ideas gained in off-the-job educational and training programs. This avoids what is called in America the "re-entry" problem when an effort is made to transfer something learned in a training course to an actual work situation. Employees are not frustrated by a lack of supervisory interest in ideas brought back from an educational program. The presence of continuous learning builds a receptive environment for new ideas through supportive supervisors and peers.

If we select Japanese management principles that focus on training and education, we find that (1) all training rests basically on self-development; (2) on-the-job training is a supervisory responsibility; and (3) job development and promotion are open to everyone.

It is interesting to note that graduates of schools are not expected to have specific job qualifications when hired. The company expects to provide professional education and training. Since academic institutions in Japan are primarily liberal arts and non-professional, these huge corporations have filled the gap by providing substantial continuing education for their employees. This situation has provided management with the opportunity to make this kind of education and training relevant to worker needs.

Organization and Administration of Education and Training Programs

The training and education function is most often a part of a Personnel Department, a General Affairs and Personnel Department, or in some cases a separate Education and Training Department. Along with the functions of planning and finance, Personnel has very high status in Japanese companies and is normally represented on the Board of Directors by an Executive Vice-President or Managing Director.

Companies organize the training and education function in different ways. Within its Personnel Division, Japan Airlines, for example, has three main departments: (1) Industrial Relations; (2) Organization and Personnel; and (3) Training and Personnel Development. Members of the training staff are most often generalists although they may be given the title of Personnel Specialist. They are grouped within the departments in a variety of ways, often by functions such as sales and marketing, technical, or passenger and traffic as in Japan Airlines. Mitsui has within its Personnel Division the following: General Affairs, General Planning, Career Development, Personnel Development, Overseas Department, Employee Relations Department, Employee Welfare, Reemployment and Consulting, Health Promotion Department, and Clinic.

Members of the Personnel Department staff are most often generalists and perform personnel and training/development/education functions as well as recruitment. Although this may seem to lessen the number of professionals in the education and training field, there is the advantage that these future managers gain an understanding of personnel systems based on experience in the department.

The administration of education and training receives strong support from training centers and schools maintained by the corporations. It is noted that government agencies also maintain large training centers. They may be located at headquarter offices, at another location in the same city, in a nearby town, or at a plant or factory. For example, Toyota has a technical high school founded in 1938 in Toyota City to train future Toyota engineers. In 1981, Toyota Technological Institute in Nagoya opened to provide a four-year technical training program specifically designed for high school graduates with industrial work experience. Both are government accredited. The faculty for the new institute includes 50 professors and part-time instructors. Toyota made an initial large grant and will contribute toward operating expenses of the Institute. Graduates are not required to work for Toyota.

Dentsu has a Training Center at Kamakura, about 100 miles from Tokyo, which provides excellent support to the firm's development of their human resources. Toshiba is well-known for its Industrial Technology Training System. This institute, established in 1954, not only supports the technical education and production of the Toshiba company, but also offers its courses to technical students throughout the world. The four major components of its curriculum are described in the Toshiba case study.

Fujitsu has an unusual range of training schools and institutes: the Fujitsu Institute of Management (FIMAT in Tokyo), a customer training center at Kawasaki, the Fujitsu Information Processing Systems Laboratory in Tokyo (training and research), and the Japanese American Institute of Management Science and Education Center in Hawaii.

Japanese National Railways has several educational installations. The Central Railway Training School is a full-fledged educational institute with a Superintendent, Assistant Superintendent, and four administrative and five instruction departments providing a wide range of training for supervisors, university graduates, higher training for regular employees, reassignment training, and retraining in 27 Class 1 and Class 2 railway training schools.

Oki Electric Company has a Human Talents Development Center which helps Oki employees in their self-development to participate in any of 80 or more courses offered by 8 outside teaching organizations.

Responsibilities for the development of personnel are shared by the staff members of the Personnel and Training Departments, the heads of departments and their managers, field offices, factories and their managers, supervisors, foremen, and employees themselves.

Determination of Needs

The question "What training and education does our work force need?" is answered by consolidating information drawn from a number of sources. Close attention is paid to the Company President's addresses, middle- or long-range goals and plans, the Board of Directors' report, and statements from the Vice-Presidents in charge of Personnel, Planning, and Finance. Line management's needs are usually obtained through field surveys seeking

comments and ideas from managers, workers, participants in courses, clients, and customers.

Program Planning

Plans for education and training programs are drafted by the education and training staff, studied and discussed by line managers, taken through the decision-making process (ringi-kessai) from the bottom up, and presented to a top executive group such as the Board of Directors or an Education Council or both. Following approval, they are then put into operation. Training and Education staff follow up and report the employees' progress and accomplishments to top management.

Education and Training Programs

The kinds of courses, their content, and their methods are not much different from those we know in America. In fact, many programs are imported from the United States and Europe such as Training within Industry, the Managerial Grid, and Management by Objectives. What is unique is the enlarged concept of learning that is integrated with management and work processes, correlated with personnel systems, and amplified by off-the-job education and training programs.

Orientation. Orientation varies in content and length in different organizations, but it is always substantial, well-planned, and appropriate for the participating group, be it junior high school, high school, or college graduate bound for staff, management, clerical, engineering, technical, or production work. Elements common to all orientation programs are:

- Explanation of the company's expectations for the newcomer, that he is no longer a student and now bears the responsibility to develop himself and to become a good company man for which he will receive strong support;

- Description of the benefits such as career paths, training and education, housing, health services, recreation, welfare for workers and their families, and vacations;
- Opportunities to meet key company officials;
- Introduction to business operations and factory processes;
- Seminars on company products, organization, and procedures.

Often, introduction to business operations and factory processes and seminars on company products, organization, and procedures are alternated, and time is given to meeting in small groups for discussion and reflection on what has been learned.

For an excellent overview of an exceedingly well-planned orientation that uses a combination of methods such as speakers, seminars, a handbook for self-guidance, and an introduction to staff and line departments, see the Seiko case study. Newcomers are divided into smaller groups for various activities that include rotational learning experiences, participation in a group retreat at a company camp for teamwork, body and mind exercise, learning of manners, and better communications and relationships. The "walking rally" teaches partners how to work together through the actual rally and provides deeper insights through small discussion groups held after the experience to reflect on what participants had learned. Follow-ups are held during the year, and the Director of this orientation program reports on progress and the growth of newcomers to top management.

Mitsubishi Heavy Industries provides "freshman training" for one year during which half the time is spent in classroom seminars and orientation to work in the head office and plants; the other half is in shop training, EDP, English, and conversation. This is for the clerical and engineering newcomers (divided into two groups), the college graduate,

and the high school graduates. A third orientation is for the production group, high school graduates who receive worker training for one year.

Self-development. One of the most striking features of how Japanese management develops their people is the enormous emphasis placed on self-development. All company policies speak to this point, and a conglomerate of their comments would read as follows:

- Self-development is the basic approach to developing an employee's capacity to perform his job;
- All development is based on self-development, since the need to develop one's ability varies with each person and his motivation, desire, and effort;
- The responsibility and obligation to develop one's own ability are in the person himself. The role of the company is to assist employees to make long-term plans for their own self-development as well as yearly updating. Since there is a limit in personal capacity as to time and expense, the company assists the individual in these;
- The individual takes the responsibility and initiative and does not wait for others to direct him.

An example of the support given to self-development is the distribution of circulars from the President of the company, the first of which was for all employees, emphasizing the importance of personal development objectives and suggesting that they work happily in cooperation with many people, persevere with their tasks, become experts in their fields, create something better, and become sensible members of society. This circular emphasized the need to consider one's daily work as being very important to one's development, as this is the basis for extending one's knowledge, experience, and skill. A separate circular went to all managers suggesting that through self-study they become examples to subordinates and foster the next generation of managers, making unselfish efforts toward the personal development of their subordinates. Thus, management focuses on actively aiding the

employee's self-improvement and on providing an environment in which their abilities are nourished and used well.

From the first pre-employment interviews and orientation, the employee learns that responsibility is placed on him to develop himself, and that his company will assist him through a support system composed of on-the-job training, guidance, counseling by supervisors, peers, tutors, mentors, off-the-job seminars, education, home study, and correspondence courses.

As part of self-development, many companies use personal development plans prepared by each employee and monitored by supervisors and the Training and Education staff. The personal development plan for Mitsubishi Heavy Industries employees covers the following items:

1. Write down your present job, what you are doing.
2. Review your last year's effort. What was its focus, and were you satisfied?
3. What do you think about your present job? Is it heavy? Good? Do you wish to do something else?
4. What are your objectives? What is your focus for next year?
5. What do you want to develop by yourself? What do you want to accomplish? Do you want to work overseas? In Japan? Where? And in what kind of job?

Also, there is space left free for whatever the manager wishes to say.

Mitsui's three-year development plan for young staff members is based on their personnel system for the development of human resources. A list of 229 fundamental tasks, organized by 21 categories (with which all young staff members are expected to be familiar), sets up learning objectives on which these young men must become knowledgeable. For example, being able to use the ringi-kessai decision-making process on 14 different transactions is one of the items; being able to write

economic and trade papers is another. The young staff man has the responsibility to develop himself, however, through rotational assignments, the assistance of his supervisors, learning on the job, the instruction of tutors, and through training and education courses available to help him.

These self-development policies and practices are in tune with the concept that knowledge and skills are things that men acquire for themselves. Development cannot be externally forced on an individual; it comes from the person's inner desire and persistence to grow and from his initiative to begin.

The feeling of responsibility for one's own development, for learning through fulfillment of the assigned responsibilities, and for knowing that what one is learning will be used and is recognized all encourage one to participate voluntarily in work groups, teams, training classes, educational seminars -- in short, to continue to learn.

"Sempai-kohai." An institution which marks Japanese industrial culture and custom is "sempai-kohai." Within organizational life, it provides a way for the older, experienced, respected manager to take under his wing, so to speak, the younger, inexperienced, manager-to-be and to provide him with counsel and guidance. In earlier pages we have illustrated the importance to continuous learning within Japanese organizations of work groups, group processes, in fact, all the ways that the self takes on meaning in terms of its contribution to the larger concept of the group. "Sempai-kohai" is, in fact, a bridge between the self-development of the young manager-to-be and learning to be a productive and harmonious member of the group. In Japanese society, the ability to maintain harmonious

relations with the group is prized more highly than the display of individual brilliance.

How does the young manager-to-be learn management? Most agree that management is both a science and an art. We recognize that there is more to management than technical, scientific facts that are intellectually comprehensive. Management is complex and cannot be learned by simply listing steps and tasks, memorizing formulas, or conducting logical analyses. The "sempai-kohai" relationship provides a sort of sounding board for the junior to talk about what he is learning to do, what he experiences and feels, and what he sees when he watches examples of managers themselves.

One has to separate the role of the "sempai-kohai" relationships from the organizational hierarchy. The "sempai" does not duplicate the role of the manager or supervisor. In fact, the "sempai" cannot be in the line of direct authority. Furthermore, he cannot be a peer. The "sempai" are chosen from the older managerial group and are from the same university as the "kohai" though from an earlier class. The "sempai's" role is not merely that of tutor, coach, or instructor. He has important functions in helping to nurture and care for the younger manager-to-be such as knowing and seeing the "kohai," listening to him, and being available at all times for advice and counsel particularly in discussing those things that a subordinate is reluctant to discuss with a boss. The "sempai" is a link with top management and sees to it that the performance and abilities of his "kohai" are known and are recognized when assignments are given for strategic positions in the company.

On-the-job training. This is the major foundation for continuous learning. On-the-job training, combined with self-development, forms the backbone of continuous learning. We have already discussed many features

of continuing learning that take place in management processes such as decision making, Quality Control Circles, small groups at the work site, and task forces or teams to solve problems. Japanese management feels that the number one duty of the manager is to train his people. The manager and supervisor use others such as tutors, coaches, or instructors to help train their employees.

In Mitsubishi Corporation, we find a seminar for training "Instructors for Freshmen" (the freshmen are the newly recruited college graduates to be trained as future managers). This system provides each freshman with one person as an instructor who works with the new recruit. The instructors, nominated by each department, learn which processes are effective for learning, and specialists from universities help the instructors to understand the psychology of new recruits. This instructorship phase takes six months; thereafter on-the-job training is left to the manager.

What does the manager do? He goes over the employee's individual development plan, discussing what off-the-job courses the employee needs, and may suggest types of education and learning opportunities other than those made available on the job. He provides an example by the quality of his own work. He fosters those conditions in the working environment that make self-development and learning obvious. He enhances the employee's personal efforts, rewards his achievements, recognizes his participation in groups, in suggestion systems, and in other activities of the company. He delegates work in ways that keep the employee learning, always giving the employee the sense of responsibility to take the initiative in making productive suggestions to improve quality. He lets the employee know how he is doing in his work and regularly prepares performance evaluations.

Off-the-job training. Most of the corporations in Japan distinguish between off-the-job courses that are required and those that are optional, sometimes called voluntary or for special purposes. Required training is closely correlated with ranks or the various levels of work. Contents of such required training focuses on the knowledge and skills required in those ranks. Details on this coordination of mandatory training and development and promotion are found in the Mitsui, Mitsubishi Heavy Industries, Canon, Mitsubishi Corporation, and Toyo Kogyo Mazda case studies.

The content of management courses is not unlike managment courses in America and varies with the levels such as basic, middle management, advanced management, or executive development. Typical subjects would be:

Basic Management:	functions and responsibilities of assistant managers, management policies, concept of management, coaching, merit rating, finance and accounting system, safety management; meetings with top company managers also are usually included
Middle Management:	extension of topics of basic management training, additional reading, free discussion, problem-solving methods, management strategy, and meeting with top management
Advanced Management:	some extension of functions and responsibilities, management policies, additional management of technology, economic problems, social problems, international relations problems
Executive Development:	associated companies' management, management strategy, special lectures, meetings with top management, and problems of international relations.

It is customary for readings to be assigned in advance and to continue during the seminars. The average length of a session is about a week, and instructors come from the company's executives, university professors, consultants, and other outside specialists.

The development and training of managers also is correlated with the personnel system of seniority. In other words, for each rank there is an age range as well as an estimate of the number of years required to teach it. Following is a brief summary of these brackets extracted from the plans of all companies visited.

Rank	Age	Education and Training
Newcomer or Freshman	20/22-23	Orientation, basic management/supervisor, rotational assignments, experience in finance, planning, personnel, pre-management seminar, correspondence courses
Assistant	32-42	Management seminars, correspondence courses, packaged management course (1 week), management games on planning, decision making

Sometimes distinctions are made between the 37 to 42 and the 42- to 45-year-old groups:

	37-42	Bucho or manager business games
	42-45	Interviews are held to arrive at plan for next assignment, often looked at as the separation of those who will become top managers and the others
Manager	45-	Advanced management, executive management

Methods of training are similar to those used in the United States such as lecture, readings, introductions to key members of the company, instruction from experts within and without the company on technical processes, management games, simulation, small-group exercises, team projects, case studies, and question-and-answer sessions. Several companies as well as the Training Center of the Metropolitan City Government of Tokyo write their own case studies about actual problems and situations.

A most interesting required course for all 45-year-old, white-collar employees and managers working for Fujitsu is their FIMAT Intensive Course (Fujitsu International Management Institute in Tokyo). Their approach to the careers of their executives at the crucial period of about 45 years extends the practice already noted of having interviews with managers who are in the 45-year bracket pertaining to their future career with the company. What Fujitsu has done is to surround this interview, as it were, with an "Intensive Course," a three-month course at their institute in Tokyo. The purpose of the course is both to revitalize managers in the improvement of their management skills (particularly since most of the current top managers went through Fujitsu's period of high growth and lacked the chance for management training), and to help shape the manager's direction toward the next phase of his career. The course, in fact, is divided into two phases: (1) a two-month general training on topics such as managing and developing human potential, cultivating management expertise, acquiring knowledge of other departments in Fujitsu, exploring policy with top executives, and cultural subjects; and (2) a one-month specialized training in one of the three following areas: International Management course essential for sales office managers working abroad, Sales Management course on knowledge required by sales office managers in Japan, and Subsidiaries Management course which prepares managers to take over the management of associated firms (see FIMAT description in Appendix B).

As mentioned before, problems exist with the traditional lifetime employment system due to the increasing number of middle-aged and older employees. Because the Japanese wage system places more importance on age and years of service in determining employees' wages than on

individual responsibilities of the job and individual performance, middle-aged and older employees receive relatively high wages. It is Fujitsu's goal to retrain this group when they reach the age of 45, emphasizing human relations, ability enhancement, rejuvenation, and also to help them move into the most appropriate career path for the next 15 years of their work for the company.

In looking at how employees are able to attend courses and to participate in educational opportunities, it is obvious that the required courses are scheduled largely by personnel and/or training based on personnel records. For the optional or voluntary courses, employees often request these, taking the initiative, asking their supervisors to have them enrolled in the courses they need or want, or the supervisor may suggest to an employee that a certain type of education or training would be helpful.

The array of off-the-job voluntary courses offered through Japanese companies is very impressive. Some are designed by the education and training staff and, indeed, may be taught by members of that staff. Others may be held at the firm's Management Development Center at the Mt. Fuji Management Training Center. Others may be at the Keio University Graduate School of Business, probably the only university which offers the American type of business administration training within a university. It is a well-accepted practice to send promising managers overseas for Master's degrees, especially in business, to schools such as MIT, Harvard, Stanford, and Insead France or Switzerland. The investment in such overseas education is high because it involves not only tuition, but also the transportation and living expenses both for the manager and his family. Again reinforcing their top management's commitment to learning, Japanese firms do not subscribe to the American myth

that their good men cannot afford to leave their jobs for prolonged research and study. The combination of long-term goals, continuous learning, and the abilities available in every staff member as a result of generalist training permit this policy.

Many optional courses, similar to those found in the United States, are available: EDP, Management Analysis, Contracts and Legal Matters, International Management, Senior Business Secretaries, and Junior Business Secretaries. Within banks, women are increasingly used as tellers. Two-thirds of Dai-Ichi Kangyo's bank tellers are women. Instead of individual coaching, Dai-Ichi Bank has established a teller course which is given at two four-day sessions. It is led by women who have been groomed through a leader's course to teach it.

Correspondence schools are used by almost all large companies. This approach is in line with placing the responsibility on the individual for his own self-development (see Oki Electric Company case study).

International training. This training is unusually frequent and intensive to prepare Japanese managers for work overseas. International education occurs prior to the actual assignment, or as a voluntary option, or after returning from overseas assignments for new training. Japanese companies have offices, factories, and joint ventures around the world. There is increasing interest in the use of Japanese styles of management in foreign countries. The courses of international training programs include policies on overseas work, technical knowledge, management skills, interdisciplinary knowledge and skills, foreign languages, adaptation to local cultures, expectations of local staff, discipline in offices, managerial delegation, human relations, and performance evaluation. Provision is also made for training local staff. Some foreign nationals are brought to Japan for special training.

Vocational and apprenticeship training. Japan has an outstanding record of developing large numbers of highly qualified technical workers in their work force. Some major points about how Japanese managers develop their people are:

- Apprenticeship is not institutionalized;
- The young and untrained learn skills on the job, and this is believed to be the most important source of skilled labor;
- The inadequacy of pre-employment occupational training is made up for by in-service training after employment;
- The Japanese Vocational Training Law of 1969 provides for government vocational training and for semi-public vocational training established and run by non-government agencies;
- Thus, authorization is given to those vocational training programs organized and provided by individual employers or their associations.

Public vocational training has provided basic manual skills to junior and senior high school graduates and retraining to upgrade acquired skills in order to keep up with technological progress or to prepare for more needs in this area.

A review of two joint training centers, sponsored by joint employers' associations, shows their basic goals to be the maintenance of a skill level sufficient for "skilled" craftsmanship. All trainees in these two joint training centers are already employed, and their daily work is counted as workshop practice. Courses and work are relevant to one another.

Some of the courses offered are: landscape gardening, carpentry, electrical wiring, architectural sheet-metal work, plastering, high-voltage cable joints, and kimono sewing.

The government provides two-thirds of the cost. A recent government subsidy facilitates employers sending their employees to public as

well as to their own authorized training programs. An incentive subsidy is received from the central government. Pay is 1730 yen (about eight dollars) per day up to 100 days. If workers are already involved in night classes, the employers can send them during the day. Though all the government legal provisions and the discussions about technical training show high regard for class work, still an all-important fact that they recognize is the importance of providing training in the actual working environment, because "continual change is bringing training closer to the shop floor."

CONTINUOUS LEARNING AND JAPANESE CULTURE

GROUP IDENTIFICATION
WORK EQUALS VALUE
FIVE RINGS: SAMURAI
THE WAY IS IN TRAINING

Continuous learning is supported by the Japanese culture. To describe the customs and traditions of Japan is an ambitious undertaking not appropriate here. One of the first things one realizes is that Japanese people are born to the group, whether it be the family, the school, or the religion. Identification of self is through the group and is probably quite similar to tightly bonded families we see occasionally in America. This strong spirit of membership in the group carries into one's work in an organization. The Japanese think of self in relation to the group; in fact, self takes on meaning as it relates to the group. This applies to identifying one's work. If you ask a man what he does or what his work is, most often the answer will be "I work for Mitsui" or "I work for Mitsubishi" rather than replying "I am an accountant" or "I am a plant manager."

The Japanese exhibit a thirst for knowledge and a continual quest for information. In addition, they believe that the value of information lies in what you can do with it. To be worthwhile, work must produce value.

Japanese people are responsible by nature. They have a basic diligence, enormous self-discipline, and control along with patience. This makes it easier to understand why the quick fix, the immediate answer, and the ready solution are not as important to them as getting the right answer regardless of the time it takes. So it can be seen that "instant

training" would not be as acceptable as the longer, continuous learning approach.

There is the inclination to "save face," not embarrass the other fellow, as is shown in the decision-making process that does not force anyone into an adversary role. Therefore, no matter what the decision is, no one is embarrassed or put down. Nor does anyone feel frustrated if their idea is not accepted. Again, if a worker is not doing well, the supervisor is expected to place him in different work, to help him do the best he can, and to find the place where he "fits."

Traditionally, academic education centers on the liberal arts. Japanese universities do not prepare students for the world of work. Thus, organizations themselves have taken on the responsibility of professional preparation, and the education and training they provide is closely integrated with the work of the organization. This helps one to understand why the Japanese organization has become a sort of laboratory for continuous learning.

Recently, Miyamoto Mushashi's A Book of Five Rings: A Guide to Strategy, a work written in the 17th Century during the era of the Samurai, has become popular reading for businessmen in America even as it has been a guide for business practice in Japan. Although it is far too comprehensive to be related in its entirety to this discussion, still there are a few thoughts that are significant to the importance of training as a strategy. "The teacher is as a needle, the disciple is as a thread. You must practice constantly."[1] "Know the smallest things and

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[1]Miyamoto Musashi, A Book of Five Rings: A Guide to Strategy. (New York: Overlook Press, 1974), p. 41.

the biggest things, the shallowest things and the deepest things."[2] "The way is in training." "Know the ways of all professions." "Develop intuitive judgment and understanding for everything,"[3] and "Do nothing which is of no use."[4]

As thought is given to just a few of the concepts in this book that relate to training and development, one can appreciate the strength of their qualitative influence. For example, "Know the ways of all professions" is of great value in a multi-disciplinary company in order to understand the strengths and weaknesses of functions and employees and to recognize interrelationships and interdependencies; "Intuitive judgment and understanding" would give a feeling for processes after absorbing knowledge and reflecting upon experience; the appreciation of reflection affects all these modes of being. To question spiritually the value of what one is doing and learning, to appreciate the importance of achieving an objective, and to consider values are truly motivating influences on the worker as he learns to contribute his best toward a group's effectiveness.

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[2] Op. cit., p. 43.

[3] Op. cit., p. 43.

[4] Op. cit., p. 43.

THINKING AHEAD:

Summary and Conclusions

What can be gained from what we have just learned about Japanese management of human resources? A great deal if we make the principles underlying these practices our own by bringing them into American organizational culture. There are several reasons why doubts of the transferability of Japanese practices to another culture should be put to rest.

In their definitive study comparing American and Japanese work ways, authors Takezawa and Whitehill do not find that "simple cultural determinism accounts for recent Japanese successes or American difficulties" in the management of human resources.[1] Although they recognize that "socio-cultural heritages as well as networks of social, economic, and political institutions" are influential, they maintain that "much of what happens in industrial relations is free from such culture-bound inertia and is susceptible to improvement or deterioration."[2]

Furthermore, to blindly copy or transfer a piece of Japanese practice is not the right approach. We need to understand the principles that underlay Japanese practice and to contrast their practices and results with the ways that people are managed in our own organizations. It is urgent that we confront and master these management issues. The regaining of U.S. leadership in management depends on it.

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[1] Shin-ichi Takezawa and Arthur M. Whitehill, Work Ways: Japan and America. (Tokyo: The Japan Institute of Labor, 1981), p. 197.

[2] Ibid., pp. 197-198.

Significance of People-Management Issues

It is certainly no news that the high performance of American management has been slipping during the past decade. Although U.S. industries are still the most productive in the world, they are gradually losing out to other countries whose productivity rates are increasing at rates substantially greater than ours.

We are learning that the management of human resources has a great deal to do with how productive we are. A recently released U.S. Congressional Budget Office study lists three major influences on productivity growth in America: (1) the quality of the labor force (workers are less trained, less efficient); (2) the pace of technological change (need for creating innovations and for adapting workers to new technologies); and (3) the capital/labor ratio (age of average plant in the U.S. is 20 years compared to 12 years for Germany and less than 10 for Japan).[3] Two of these influences on productivity involve the human resource area, and the third, aging plants and equipment, indirectly influence worker output.

Takezawa and Whitehill enlarge our understanding by saying that the real competitive advantage in business today and tomorrow lies not in capital, technology, or even market know-how, but rather in "the unique ways in which workers and managers in a given social context organize themselves for work."[4]

Increased concern for managing human resources is reflected in the increased concern of organizations about the selection of those entrusted with the leadership of this aspect of management. Apparently, there is

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[3]Peter Grier, "Made in U.S.A.: Is American competitiveness slipping?" in The Christian Science Monitor, March 12, 1981, pp. 12-13.

[4]Takezawa and Whitehill, op. cit., pp. 3, 14.

now a "future" in helping firms hurdle their people-problems.[5] Young managers from the line, on the "fast track," are now being shifted into personnel: a change from the usual preference for finance and marketing. Why? The prediction is that in the 1980's, human resource problems are expected to be the major "hot spots" for developing advances in U.S. companies.

Principles and Issues in Managing People

One way to generate useful insights for U.S. management is to look at several major challenges facing organizations such as:

- How do we utilize learning to improve productivity?
- How can we work together to solve conflicts constructively and harmoniously?
- What learning process best helps us to adapt to changing technologies?

First, to improve productivity, we need to look at all its sources. Particularly, as we have seen, we need to look at the way in which management sets up the complex factors of policies, practices, and physical resources which can be called the working environment. The worker's motivation, loyalty, capacity to produce, concern for quality, and overall value to the organization is deeply affected by the design of this working environment. Each organization can take a fresh look at where their working environment is actually leading them.

Japanese practices integrate continuous learning with work processes to link supportive personnel and training systems and to encourage people to motivate themselves. The principles underlying their practices follow.

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[5]David Cook, "A future in helping the firm hurdle people-problems," in The Christian Science Monitor, April 7, 1982, p. 11.

- A worker's commitment to his organization, and his desire to produce, come from the belief that management has a high level of concern for people, that his abilities will be properly used, that he is part of a "family," and that he participates in management activities and shares in the profits as well as the responsibility for productiveness.

- The design of work, as well as the work environment itself, encourage personal responsibility. Workers can stop an assembly line, call attention to defects, initiate corrective action, participate in decision making, initiate proposals, and correct failures to meet standards.

- Managers deliberately delegate full responsibility to workers, encourage their personal growth by varying their work assignments, support their self-development, encourage learning, cooperate with the Personnel Department's rotational assignments, and maintain close working relationships with and personal concern for workers.

- Older managers, requested by younger managers to become their mentors, feel a continuing obligation to become "father figures" to younger managers, outside the limitations of the formal hierarchy, and to help them thrive within the organization by providing the kind of help that managers cannot.

- Before hiring, each person is given a clear description of his career options. He is hired not for a specific job, but as the "whole man" to be placed in many different jobs. The fact that "job development and promotion are for everyone" is validated in his experience after hiring.

- Harmonious relationships, resulting in the integration of management and labor needs, are a product of searching for every alternative solution to a question rather than limiting it to two conflicting alternatives.

- The essence of managing and developing people is team management, where workers support one another in small groups to spark learning, to invent new processes, and to produce effectively. Individual workers have learned how to find satisfaction and fulfillment in the achievements of the group.

- Personnel systems provide: job security for managers so that they may delegate complete responsibility to their subordinates who then learn through fulfillment of their tasks; long-term employment for employees who find it worthwhile to be creative and productive; and job classifications that allow flexibility in the assignment of work and that broaden experience and adaptiveness to job changes.

- The heart of training and development of workers rests on their assumption of responsibility for self-development and the manager's supervision of on-the-job training. All other training and education supplements these.

The belief that harmonious union-management relations is exclusive to Japanese culture is worth mentioning here; it is not true. A few decades ago, angry union activists skewered the clothing being worn by their Japanese managers with bamboo spears so that they could not run away from the endless hours of "collective bargaining." Also, the Japanese approach to labor management is not a cultural eccentricity. Sony Corporation in America has demonstrated in their plants in the United States that the productivity of American workers can rise very close to that of the company's factories in Japan.[6]

The Role of Continuous Learning

We have just summarized those principles of management which contribute to productivity, to team management, and to the organization's capacity for changing technologies. Implied, if not explicitly put forth, was the fact that the key to successful practices in the management and development of people is the resource of continuous learning. Not only is continuous learning a resource, it is also a non-depletive resource. In fact, as was pointed out by Dr. Noritake Kobayashi, it has a multiplying effect: "Where group orientation is strong, the knowledge and skill which are acquired by the employees are generally shared by

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[6]Steve Lehr, "Overhauling America's business management," in The New York Times Magazine, January 4, 1981.

colleagues."[7] Thus, the integration of learning into the work of small groups, problem-solving teams, and quality circles multiplies knowledge and skills. Then why continuous learning, and what is meant by it?

In most productive organizations, today's world of rapid change makes yesterday's knowledge and skills obsolete. Changing technologies, processes, and control techniques press in on each individual. One can no longer complete his or her learning. The place of learning must now be on the job (or close to the office or factory floor). Learning needs to be continuous, for the value lies not in getting people trained, but in maintaining and increasing competence.

The major factor of a system's effectiveness is its incorporation of learning with work. The key concepts to this process are listed below:

- Learning must come through the work itself. Learning is an inescapable part of work and must be centered around work processes. Learning is not something separate from doing; it is one process -- learning/doing. The traditional notion of off-the-job training separates learning from doing and generally makes the transfer of ideas to work balky or slow.

- Learning must be developmental. Traditional training was considered a corrective, a remedy for poor performance that caused errors. It was designed to bring workers "up to par." We now know that errors come from poor procedures, from workers who do not want to perform, from faulty personnel policies, or from managers who are weak in handling their subordinates.

- Learning means discovery. Learning on-the-line includes improvising, trying-out new methods, finding and correcting errors, and inventing new and better ways to do the work.

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[7]Noritake Kobayashi, "What Will Be the Development Pattern in Management Style of the Japanese Multinationals in the 1980's?" Paper presented to the Center for Education in International Management. (Geneva, Switzerland: September 1981), p. 2.

The Prospects and Imperatives

What are the prospects for facing and handling these issues in managing people? Takezawa and Whitehill's study, Work Ways: Japan and America, reveals "hopeful signs" that American workers are becoming productivity conscious, able to accept technological changes, and have improved their work-group morale and their relationships with supervisors. On the negative side, these authors claim that American workers' relations with management have deteriorated, the ties to their place of employment have weakened, they are increasingly alienated, they demand more rights, and they have lost confidence in management as a source of help. Thus, they find an urgent need to recognize "the vital assets of American human resources which can have a crucial bearing on America's future role."[8] They say that American management, as well as unions and the government, should "share in capitalizing on the constructive attitudes."[9]

What are the imperatives for integrating continous learning systems through learning-doing on the job that is well-reinforced by personnel training systems?

Saint Francis De Sales said: "You learn to speak by speaking, to study by studying, to run by running, to work by working . . . all those who think to learn in any other way deceive themselves." Each organization must analyze its people and its work and build its learning systems around these.

As a beginning, describe the makeup of the work force: their ages, occupations, abilities, and values. Estimate where changes in people's

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[8]Takezawa and Whitehill, op. cit., pp. 197-199.

[9]Ibid., p. 198.

jobs will occur. Confront the serious issues this report has raised in how your organization manages people by looking at them from a 360-degree approach and not from just one angle. The interrelationships and interdependence of all viewpoints are vital. Set up collaborative groups representing managers, workers, unions, innovators, and personnel and training to study the issues and to probe the principles that bring about harmonious and productive adaptation to change. When your people are involved in discovering and selecting the best innovative solutions, they will support them and make them work. Rely on continuous learning, the central resource, a non-depletive resource that grows as it is shared. Finally, seek responsible system-design services to put it all together for your organization, in your industry, in your plant community, and with your resources. An effective organization of able managers and efficient, developing workers is a concentration of continuous learners and high producers.

APPENDIX A

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APPENDIX B

FUJITSU FIMAT PROGRAM DESCRIPTION

EIMAT

Training Programs for 45 Year Old White-Collar Employees

In the year Fujitsu white-collar employees reach 45, they are released from current duties to attend a 3-month intensive training program conducted by the Fujitsu Institute of Management (FIMAT). During training their old jobs remain intact and they receive their regular wages. All employees, including those at associated firms in the Fujitsu group, are entitled to participate. Established in March 1979 and financed by Fujitsu, FIMAT is an educational institution devoted to the planning and implementation of employees' training programs.

Objectives of Training Courses

The first training course began in April 1979, with the following objectives:

- To enable managers to acquire a wide range of management techniques, to build them into prospective top managers, or to qualify them as capable managers of sales offices in Japan and abroad or as directors of associated firms.
- To teach management level personnel the advanced management techniques they need to cope with an evermore complex business environment.
- To efficiently use human resources within the Fujitsu group by putting the right person into the right job. Each prospective manager undergoes multilateral evaluation to determine his personal proficiency and orientation for the future.
- To instill in each participant the incentive to develop the self-discipline and consideration for others needed by a high ranking member of the Fujitsu group.

Course Description

The first two months of the 3-month course are geared not only towards improving management and actual working skills, but also cover general subjects to cultivate in businessmen on international world view. In the final month students receive specialized instruction related to projected job assignments. The 200 to 210 employees that turn 45 each year are divided into groups of 70 to participate in one of three courses held throughout the year.

GENERAL SUBJECTS TRAINING COURSE

General subjects, many of which are taught by university professors, emphasize management and the development of human potential. Department chiefs, section chiefs, and non-management personnel are put into separate classes, each comprising 20 to 25 persons with comparable qualifications. General subjects cover the following:

- **Cultivation of management expertise**
  Subjects aimed at developing management expertise cover about 50% of the general curricula. Case studies, with guidance given by Keio Business School professors, are provided on such subjects as personnel and labor relations, accounting, marketing, international management, finance, business policies, etc. Participants receive training on decision-making, project management and leadership training; they also use computers to do exercises on management planning.

- **Acquisition of general knowledge of other departments in Fujitsu**
  As the company's organizational structure grows more complex, employees know less and less about departments outside their own. For example, a sales office manager must frequently deal with people outside the company. To be successful, he must have a broad understanding not only of his own area of business, but of other Fujitsu activities as well. Participants are given opportunities to visit Fujitsu facilities they have not yet seen, and to study, both inside and outside the company, technological trends and marketing strategies. About 15 percent of the general curricula focuses on this type of training.

- **Meetings with executives**
  Another 15 percent of the general curricula is devoted to participants' meeting with and carrying on discussions with executives. Because Fujitsu has more than 36 thousand employees, most personnel will have little contact with members of the board in their daily jobs. To provide participants with the opportunity to meet the upper echelon, all 21 of such Fujitsu's full-time executives attend meetings, making personal contact with each participant. Through these meetings, participants get an inside look at a particular executive's policies, his character, his viewpoint on life; all of these give participants a yardstick with which to measure their own work. These meetings are also a good chance for executives to learn about employees' work, and to listen to their ideas. Each executive evaluates the participant with respect to expected future assignments and forwards the evaluation to FIMAT. By meeting with participants, executives also get the chance to identify personnel for assignment to jobs they are best suited for.

- **Cultural subjects**
  Cultural subjects are twenty percent of the curricula. They include music, art, drama, literature, history, religion, music and poetry, international politics, and international economic activities. Participants are given introductory courses on these subjects to build up self-confidence and discipline. The courses are taught by university professors and journalists.

SPECIALIZED COURSE TRAINING

After completing the 2-month training on general subjects, participants return to their original jobs for three months. Then they go back to FIMAT to receive the final month of specialized training. There are three areas of study as described below. The area the participant studies is determined by the executive in charge of personnel, who bases his decision on the participant's request, executive opinions and FIMAT's evaluation. Whenever possible, lecturers are selected from among experts in the Fujitsu group, but outsiders are called in when suitable lecturers are not available. The present ratio is about half-and-half.

- **International management course**
  The international management course provides lectures on trade, currencies, exchange rates, taxes, management and labor relations, laws pertaining to anti-trust, and contracts – all the essentials for sales office managers working abroad.

- **Sales management course**
  This course provides lectures on marketing strategies, contracts, management of accounts receivable, customer credit information, advertising and public relations, and courtesy to customers, knowledge required by sales office managers in Japan.

- **Subsidiaries management course**
  The subsidiaries management course provides lectures on labor relations, accounting, procurement, and production techniques; business games are conducted to prepare participants to take over management of associated firms.

Each participant who successfully completes the 3-month course is awarded a Certificate of Completion, certifying that he has been trained for his new assignment. Training records are kept by the personnel department and are referenced when reassigning personnel.

Training Background

Among companies where the lifetime employment system has taken hold, only Fujitsu has instituted such a comprehensive training program for employees reaching the age of 45, isolating them from their jobs for three months. With the exception of newcomer technical training programs, training programs in Japan usually last only 3 to 5 days, or 10 days at the most. Fujitsu's unique training program has attracted a lot of public attention. Following are the main reasons why Fujitsu established such a large-scale independent training institute.

CULTIVATION OF WELL-QUALIFIED PERSONNEL

First, competent personnel are required for the company to grow. In 1935, Fujitsu started off as a telecommunications equipment manufacturer, expanding its operation in the mid-fifties to the production of computers. Putting the company's future on the line, Fujitsu geared up to produce computer systems and equipment, and today, computer systems comprise as much as 70% of Fujitsu's total sales. In domestic sales, Fujitsu is Japan's number one maker, outselling IBM since 1979. Fujitsu's operations have grown steadily, at an annual growth rate of 15% to 20%. To support this growth, Fujitsu not only invests heavily in R&D activities, but also aggressively works to expand its overseas market, reinforce its domestic marketing network, and establish more associated firms within the Fujitsu group. Many qualified personnel are required. Japan has a labor shortage – a condition quite different from that of the U.S. – and companies must train their own employees into a workforce of qualified people. The strategy for investing in the development of human resources is just as important as the strategy for investing in R&D activities.

Fujitsu enjoys an excellent reputation for its highly qualified, hardworking employees, experienced individuals with first-class technical expertise in their areas of speciality. White-collar workers in Fujitsu comprise two-thirds of the workforce, a

common feature of today's knowledge-intensive industries. The majority of these white-collar people are engineers. But when persons who have always worked on their own are assigned to managerial positions or to other jobs completely different in nature without previous experience, there is no assurance they will do well. If a person fails in a new assignment, it not only affects his career, but the company loses as well. For an employee to be successful in a new assignment, he must have the aptitude and knowledge required for the job. Realizing this, Fujitsu established FIMAT to analize each employee's potential, and to provide the training appropriate to new assignments.

MIDDLE-AGE AND OLDER EMPLOYEES

Another prime objective of FIMAT is to revive enthusiasm and upgrade the abilities of middle-aged and older employees. Two consecutive "oil shocks" hit Japanese industries hard. The high level of growth in the Japanese economy before these shocks dropped drastically, making it difficult for companies in Japan to continue the conventional employment system. Put simply, the traditional lifetime employment system based on seniority, a system unique to Japan, has become a heavy burden on employers. The Japanese wage system places more importance on age and years of service in determining employee wages than on job description or individual ability.

Therefore, middle-aged and older employees, those in their 40s and 50s, receive relatively high wages, compared to ability and productivity, and have been a main topic of discussion on employment problems in Japan.

After reviewing the employment and wage system, some companies suffering from the slowdown had to dismiss employees. Fujitsu alone adopted a radically, different policy. The policy called for re-training middle-aged employees when they reach 45, with emphasize on human relations, ability enhancement, and rejuvenation. With this

program, the company hoped to get the most out of employees for their final 15 years before retirement.

It was a dedicated workforce that enabled Fujitsu to develop independent technology and establish itself as Japan's number one computer manufacturer – without having to establish partnerships with foreign companies. But while employees were busy helping Fujitsu succeed, little time was left over for cultural activities or for developing personal tastes. Nor was there much time for anything outside narrow areas of speciality. But to succeed in the international marketplace requires businessmen with broad knowledge on many subjects. Our plan, then, was to isolate 45-year-old employees from current duties for re-training. The training period is the ideal time for them to seriously consider the direction their lives should take, to build better personal human relations through education, to gain confidence in life, and to tackle new jobs with a fresh will to work.

Educational Investment and Its Effect

This training program was originally proposed and implemented by Taiyu Kobayashi, Fujitsu's president at the time. Some executives and many candidates for enrollment opposed the plan, protesting that the long time away from the job would delay work and adversely affect business. He, however, prevailed and persuaded others to support the program.

Fujitsu spends 600 million yen each year on this program, about 3 million yen per student, of which one million yen goes to FIMAT as tuition, and about 2 million yen to participants wages during the training period. Fujitsu even spent as much as one billion yen to construct a dormitory and other training related facilities. Through the support of many people and this large investment, approximately 650 participants have received training since the program began three years ago in 1979.

It is difficult to evaluate the effects of the program in such a short period, but fruitful results should become obvious as time goes by. At this moment, however, we are able to report the following achievements.

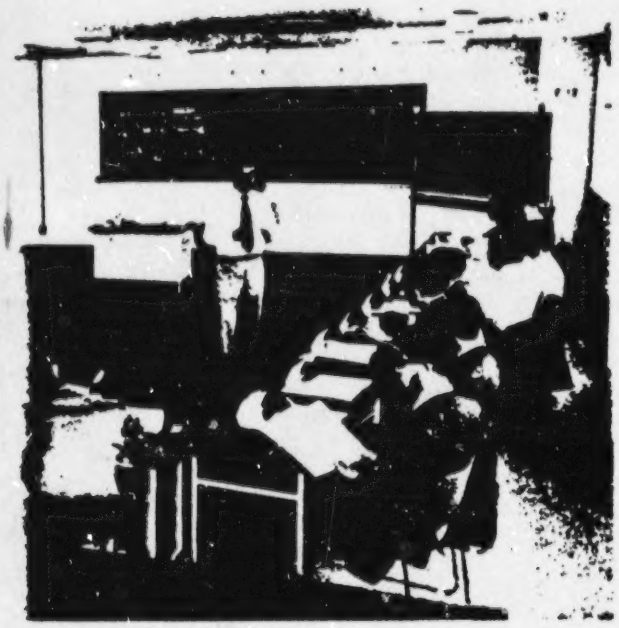
- **Contribution to new job assignments**
  Employees who underwent training are now becoming active in their new jobs. Of those in international activities, for instance, 10 graduates have been assigned as overseas sales office managers, and 26 as managers in charge of international trade. Domestically, 18 are directors of sales offices and 85 are marketing managers who are actively applying the knowledge they acquired to shaping the direction their new jobs take. About 40 graduates have been assigned as staff members mainly to newly established associated firms in the Fujitsu group. Ten are executives responsible for company management. Another eight are assigned as directors in charge of operation divisions responsible for the development and production of products. Fujitsu expects increasingly more graduates to be assigned to new jobs.

- **Practical application of knowledge at workshops**
  Graduates are applying the management techniques and other knowledge acquired through the training to their work. In the past, an attempt by a single individual to do this would have been extremely difficult, no matter how strong the will. But as more people complete the training and work together for improvement, we see increasing evidence of the program's success.

- **Individual views**
  Supervisors evaluations indicate that the major achievements are a broader view of general matters, and an aggressive approach to work with increased self-confidence.

  These achievements result from what participants learned or were exposed to in group discussions, and show that old attitudes are being re-examined.

  Viewed from another angle, graduates gain inner satisfaction for being given the opportunity to improve themselves, and because of the contacts they made dur-



ing training with personnel from other departments, they are able to coordinate work more smoothly.

Graduates are reading more than they did before training – both books and other materials. They enjoy attending concerts and visiting art museums. During the 3-month training, they made friends outside their own departments, broadening their base of associates widening their perspectives.

They are grateful for the educational program supported by Fujitsu's large investment, instilling in them stronger loyalty to the company they work for.

- **Fostering growth of young subordinates**
  As mentioned earlier, many were concerned that production would decrease and R&D activities be delayed if experienced personnel should be removed from their jobs. These fears proved groundless and justified. While the leaders were absent, other employees had the chance to improve on their own; all indications are that they have performed outstandingly.

FIMAT Activities

FIMAT makes the most of the know-how gained through this training program by applying it in various areas. For example, a month long seminar was begun in 1980 for middle managers from associated firms. To date, 250 trainees who are contributing to development of the Fujitsu group have completed the seminar. Also in 1980, a seminar was started for Fujitsu employees, primarily those in their thirties, who are scheduled for assignment overseas. At present, 42 persons have finished the seminar. Fujitsu employees who were promoted in 1981 to supevisory positions are currently receiving management training. During the initial year, 270 are scheduled to attend the course. Preparations are also under way to upgrade the quality of young sales managers in Fujitsu, starting in 1982.

FIMAT conducts a management seminar every two months for Fujitsu executives and associated firms presidents; it also edits and publishes the monthly magazine "Fujitsu Management Review," for distribution to supervisors in both Fujitsu and associated firms. Through these activities, FIMAT continues to play on active role as an educational institute in managerial activities for the Fujitsu group.

FUJITSU Profile

Established in 1935, Fujitsu Limited today ranks as Japan's top computer manufacturer and one of the world's leading suppliers of telecommunications systems and equipment. Fujitsu is also a major producer of semiconductors and other advanced electronic components.

Fujitsu currently has more than 36,000 employees working at 12 plants, a variety of R&D facilities and educational institutions, domestic business offices, and numerous sites abroad. With annual sales of over US$3 billion and operations spanning the globe, Fujitsu is a major international presence.

In the field of telecommunications, domestically Fujitsu has played a vital role in the expansion of Japan's telecommunications networks. Overseas, it has contributed substantially to telecommunications system construction in numerous nations, thereby winning widespread recognition and respect for its state-of-the-art telecommunications technologies and comprehensive system engineering capability.

For more than two decades Fujitsu has also maintained a prominent position in Japan's computer industry, today ranking as the nation's number one computer manufacturer. It independently designs, develops, manufactures and markets a full line of advanced computers—everything from microcomputers to large-scale systems.

Backed by its unique integration of superior telecommunications and computer technology capabilities, Fujitsu has also developed and produced a number of large-scale data communications systems and a complete range of control and management systems.

When it comes to telecommunications and computers—and to their intermeshing—Fujitsu is a name that has come to mean, to more and more people around the world, a standard of quality, reliability and technological excellence.

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